ADDIS ABABA UNIVERSITY
COLLEGE OF NATURAL SCIENCES
SCHOOL OF INFORMATION SCIENCE

ASSESSMENT OF READINESS FOR ADOPTING KNOWLEDGE MANAGEMENT IN LAND DEVELOPMENT AND MANAGEMENT BUREAU: - THE CASE OF LAND HOLDING REGISTRATION AND INFORMATION AGENCY.

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ADVISOR:
GETACHEW MENGESHA (PHD)

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Name and Signature of the members of examining board

Name	Title	Signature	Date
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	Examiner		
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June, 2017

DECLARATION

I, Fikru Mamo declare that this research study on "**Assessment of Readiness for Adopting Knowledge Management in Land Development and Management Bureau: - The Case of Land Holding Registration and Information Agency"** is my original work and has not been presented for a degree in any other university. All the sources used or quoted have been indicated and acknowledged as complete references.

Student Name: Fikru Mamo Signature: _____ Date: _____

Advisor Name: Getachew Mengesha (Dr.) Signature: _____ Date: _____

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Glossary of Abbreviations

LHRIA	Land Holding Registration and Information Agency
KM	Knowledge Management
KMS	Knowledge Management System
IPRIA	Immovable Property Registration and Information Agency
ICT	Information and Communication Technology
IT	Information Technology
AA-CADIS	Addis Ababa Cadastral Information System

Abstract

In today's knowledge-driven society and information economy, it is imperative to adopt knowledge management in an effort to overcome deficits in information and to be competitive. This study aimed to investigate the determinants of knowledge management (KM) adoption, as well as to assess the level of readiness for knowledge management (KM) adoption of Land Holding Registration and Information Agency (LHRIA). For this research, a research model which contains factors:-Strategy, Technology, Organization, People, Culture and Environment was used.

After pre-tested, 127 questionnaires were distributed to head offices and its branches of LHRIA and 124 were returned. From the returned questionnaires, four were discarded during data screening phase. As a result, data from 120 respondents was analysed using partial least squares (PLS). Validity and reliability tests were conducted using Smart PLS version 3.0 software package as well descriptive and analytical statistical reports were generated. This study revealed factors that influence KM adoption. The revealed factors that have impacted KM adoption are Strategy (influence indirectly), Technology, People and Culture. Meanwhile, the factors that are not connected to KM adoption are Organization and Environment.

In addition, Aydin and Tasci's assessment model was used to provide better insights on the level of readiness of LHRIA for adopting KM. Based on the level of readiness of this assessment model, all factors in the model used in this study and significant for readiness for KM adoption have computed mean scores below the expected level of readiness (Mean (MeIr) < 3.4). This implies the need for numerous improvements in Land Holding Registration and Information Agency in order to adopt KM.

The results of this study can provide guidance to organisation's when considering readiness and factors significant to implementing KM. In addition, this study advances the theory of adoption behavior and contributes to the foundation for future research aimed at improving my understanding of LHRIA and its employee's behavior.

CHAPTER ONE

1.1. Introduction

Nowadays, knowledge management is very crucial. It is the starting point for bringing the land sector in to the knowledge economy. The organizational information of land management is enabled adoption of service-oriented approaches and using appropriate e-tools to reduce transaction costs, increase transparency and improve access to information to answer the basic enquiry.

One of the prerequisites for the knowledge economy is the existence of an educated workforce that is required to implement and maintain the various components of the technological framework as well as to access and use the information and knowledge products and services. The land sector is therefore being brought into the knowledge economy by integrating the transactions in that sector of the economy into the e-service system, (Michael S., 2008). Due to this recognition, many organizations attempt to adopt knowledge management (KM) processes to manage their knowledge properly.

Readiness in Knowledge Management means the readiness to identify, collect, organize, store, distribute, and share of knowledge, and the capability to adopt and use of its advantages, (Mohammadi, 2010). According to him readiness assessment allows institutions to design systems and put in place appropriate measures that are required for its success. It is also considered important since it creates new business opportunities and competitiveness.

In this study the theoretical framework, in which a brief description of concepts of knowledge, knowledge management, readiness in knowledge management, component of the research model and hypotheses are indicated. The methodology used in the study, including the model validation process, data collection, data analysis, and report generation techniques used are discussed. Subsequently, the presentation of the study result, the discussions on the results of the study and reflections on the research results are included in this part. Finally some conclusions and remarks are presented.

1.2. Background of the Study

In the early 1990s, Drucker (1993) observed that, for the emerging knowledge-based economy, the traditional primary resources of production (land, labor, and capital) were becoming secondary to knowledge. This was echoed by Nonaka (1994), who suggested that knowledge was the single most important production factor in terms of the capacity of an organization to survive and, subsequently, the means of gaining and sustaining competitive advantage.

Nonaka (1994), Nonaka and Takeuchi (1995) stated, in post-industrial society, knowledge within an organization is identified as the main source of its competitive advantage. It has been also recognized as one of the main assets in the contemporary world. Because of this acknowledgment, many organizations work to adopt knowledge management (KM) to deal with their knowledge legitimately. The processes of knowledge creation, storing, sharing, application, and protection have been distinguished as KM processes in the KM processes.

According to Razi et al. (2009), the adoption of KM processes is far reaching among business organization everywhere throughout the world. Due to these reasons, KM adoption has increased much consideration from academician, investigates, and professionals. The goals of KM are the leveraging and improvement of the organization's knowledge assets to force better knowledge practices, improved organizational behaviors, better decisions; and improved organizational performance. It is critical for organizational success and in achieving its objective(s).

Knowledge is perceived as a critical weapon for sustaining competitive advantage and improving performance (Chang and Chuang, 2011). Chen & Lin, (2009) also asserted that in today's increasingly turbulent and competitive environment, knowledge and its management have been recognized as one of the most strategic inputs for sustainable competitive advantage and performance promoter of any organization.

In light of Naeimeh et al. (2013), even if many organization have turned to invest in KM, only few of them have the capacity to attract, accept and adapt KM but many of them fail in these process. Therefore, before implementing KM, identifying the critical factors that determine the current situation of the organization for implementing KM are important.

According to Sepideh et al. (2015), Jennex et al. (2005), before the deployment of knowledge management system, readiness research should be studied. Implementation of KM relies on upon different elements, including: development of suitable infrastructure, integrate KMS to organizational processes and information systems (IS); organizational structure; organizational culture; senior management support; staff training, maintaining the institutional memory; creating a KM strategy; KMS security; making inspiration and responsibility using KM in the assessment process.

In light of Chua & Lam, (2005), some of the reported disappointments were relates to starting step of KM implementation. As a result readiness assessment for KM implementation must be considered as a critical key issue (Holt et al, 2004, Siemieniuch and Sinclair, 2004).

Readiness for change is viewed as a basic forerunner for fruitful execution of complex changes in human services settings. Surely, some recommended that inability to set up adequate readiness represents one-half of all unsuccessful significant organizational change activities (Weiner, B.J., 2009). The basic limitation for KM implementation is the level of readiness in organizations to adopt KM strategies. Evaluation of an organization's readiness level could serve as a guide to leaders as they plan and execute KM activities. (Zin et al. 2010)

1.2.1. Background of the Agency

Immovable Property Registration and Information Agency /IPRIA/ was established in 2010 through the Addis Ababa City Government Proclamation Number 22/2010 and 33/2010. In 2015 its name was changed to Addis Ababa City Government Land Holding Registration and Information Agency (LHRIA) in accordance with Re-establishment Proclamation No. 45/2015". The Agency has head office at the city level as well as ten branch offices at the sub-city level.

The main functions of LHRIA is performing all tasks related to maintaining all real property and cadastral data of Addis Ababa city which includes, the registration of ownership and possession, the archiving, the organization and the issuance of certificates or title deeds and the provision upon request of information about an immovable property. Computerized Land Information system has been developed by Addis Ababa City Administration which is called Addis Ababa Cadastral Information System (AA-CADIS) for the provision of quality service.

1.3. Statement of the Problem

Chong et al. (2004) undertook a study to determine how knowledge adds value in an organization. His study indicate that a very limited number of organizations possess a mechanism to monitor the return on investment in knowledge-based competencies or interrelated intangible assets. The majority of the organizations surveyed did not have the ability to determine the business value of their investment in the area of Knowledge based competencies.

Chua and Lam, (2005) found one of the knowledge management failure factors to be improperly structure content, which made it difficult for the practitioner to use and apply the knowledge. Olcer (2007) found that four of the greatest barriers to KM were the inability to use information, the inability to interpret information, the lack of contact between employees for the purpose of knowledge sharing, and the inability to access knowledge. Similarly, Weber (2007) talks of failure due to problems with knowledge transfer.

Alan Frost (2014) losing knowledge due to staff retirement is a result of poor planning. Similarly, a lack of widespread contribution from stakeholders of the organization could be the result of an inadequate organizational culture and its ability to foster reciprocity and openness, lack of owning mistakes and willingness to implement tasks proactively and also to contribute to the KM practice.

According to Ida and Charles, (2010), organizations have to undertake a broad range of initiatives to assess and actively manage their readiness for KM implementation. They need to be aware of the challenges that may inhibit the success of KM initiatives. Among the main challenges recruit and retain high quality people is the one that is becoming increasingly difficult to manage. The other challenge is to make sure that organizations have the right resources allocated to the right purposes in support of readiness. Even with a solid foundation of readiness funds in the budget, the costs of unbudgeted contingency operations can reduce resources available to carry out training, maintenance, and other readiness-related activities for adopting KM.

Even though, I couldn't find related research on land sector, there are researches on construction industry, in organizations and in developing countries shows that the challenges of people's attitude and habits, recruit and retain high quality people, lack of resource, culture of the people, information theft,

computer-assisted fraud, vandalism and computer hacking on the readiness to adopt KM (Ida and Charles, 2010, Sepideh et al., 2015).

Land Holding Registration and Information Agency is established to insure the implementation of a secured, reliable, trustful and efficient legal Cadaster Registration and Information System, and to foster the economic development of the City of Addis Ababa and for the advantage of Citizens, public and private sectors. So Knowledge management is important in LHRIA to be able to create, store, transfer and apply knowledge with the purpose of better achieving the objectives of it.

The data of LHRIA and its customers complaints shows that the declining quality of the service provided and revenue made by LHRIA. One of the reason for this problem is LHRIA's inability to trace its knowledge and reuse it when needed. The required knowledge is often available somewhere in and also outside LHRIA but it is not accessible when the LHRIA need it. This happens because of knowledge in LHRIA is often not organized, managed and stored properly due to lack of knowledge management center in it.

Even though there is no study that shows the exact number, based on my observation many experienced professionals are leaving the agency per year due to various reasons (external transfer, retirement, death, personal reason and so many other reasons). Unless LHRIA facilitate the acquiring, structuring, storing and sharing of their knowledge, this mobility of experienced and knowledgeable professionals will face a serious challenge in its service provision and revenue it made.

This study has attempted to fill the gap and propose the setting up of knowledge management practice by identifying the factors that affects knowledge management implementation and investigating the level of readiness of LHRIA for adopting knowledge management.

1.4. Research Questions

To this end, this study attempts to answer the following research questions:

- What factors contribute on knowledge management adoption in LHRIA?
- To what extent LHRIA is ready to adopt knowledge management?

1.5. Objectives of the Study

1.5.1. General Objective

The general objective of this study is to identify the factors affecting KM adoption and to assess level of readiness of Land Holding Registration and Information Agency (LHRIA) for adopting knowledge management.

1.5.2. Specific Objective

- To identify the potential factors affecting readiness of LHRIA for knowledge management adoption.
- To assess the impacts of the identified factors on readiness of LHRIA for Km implementation.
- To assess the awareness of employees of LHRIA on knowledge management.
- To assess the level of readiness of employees in LHRIA to adopt knowledge management.

1.6. Scope and Limitation of the Study

There are eight land sectors in Addis Ababa Land Development and Management Bureau. Among these sectors, this study has been delineated to Land Holding Registration and Information Agency. If this research is conducted in all land sectors of Addis Ababa city, the result would have been more useful. However, due to financial and time constraints the study was conducted in this land sector only. The key concern of this study was to identify factors affecting readiness to adopt KM and to assess the readiness of LHRIA for adopting knowledge management. Therefore, the findings could not be generalized for the entire sectors of Land Development and Management Bureau in Addis Ababa city.

Land Holding Registration and Information Agency has head office and ten offices at sub city level. This research was conducted in head office and all sub city offices of LHRIA. Even if there are so many variables that have impacts on readiness to adopt KM, this research is limited to some of the variables that have the potential to affect the readiness of LHRIA to adopt knowledge management. This is because of time and financial constraint and also the difficulty to manage all variables that have impact on LHRIA's readiness for knowledge management implementation. Moreover the study was focused on degree holders and above which might possibly clearly understand the research instruments of this research.

1.7. Significance of the Study

- This study will generate valuable information on readiness for adopting knowledge management in Land Holding Registration and Information Agency and also in other organization.
- This study will assist LHRIA to realize the most important factors that are essential for readiness to adopt knowledge management.
- This study will support LHRIA to formulate a better strategy to be ready for adopting knowledge management.
- Identifying the factors influencing the adoption of knowledge management will help LHRIA to consider them and to be ready for knowledge management implementation and as a result of this, LHRIA will improve its service performance as well as strengthen the relationship between other land sectors and stakeholders.
- This research will also enable the LHRIA's administrator, employees and other stakeholders to have a clear insight of the adoptability and practicability of knowledge management. Moreover, there is no study in the land sector in Ethiopia related to knowledge management adoption. Hence, it will have significant contribution for future researches that will be conducted in land and other sectors related to KM.

1.8. Organization of the Thesis

This thesis is organized into seven chapters. The first chapter contains introduction, background of the study, background of the study, statement of the problem, research question, objective of the study, scope and limitation of the study and final significance of the study.

The second chapter consists of the review of the literature that discusses about definition and types of knowledge, overview of knowledge (explicit and tacit knowledge), knowledge managements, Readiness in Knowledge Management, Readiness, Knowledge Management Readiness Model, about Readiness factors (strategy, Technology, Organization, people, culture and Environment) that are used for KM readiness assessment.

The third chapter presents about the research model and hypothesis development. The chapter also presents hypothesis of the thesis with literature support.

The fourth chapter explains research design and methodology. Under this, it describe the research philosophy and research design employed in this study. The chapter also discuss about population and sampling techniques that is implemented in this theses, about questionnaire development, data collection method and data analysis procedure. Finally, ethical consideration of the study and summary of the chapter presented.

The fifth chapter discusses the data analysis and findings. It includes preliminary evaluation like data screening and demographic data of the respondent, evaluation of measurement and structural model that means the reliability and validity tests presented, significance test, path analysis, *R- Squared Value* (R^2) and Predictive relevance (Q^2). Finally, hypotheses testing of the study and summary of the chapter presented.

The sixth chapter discusses the findings from Chapter 5. The research questions are answered and the hypotheses tested are discussed by comparing and contrasting results with Aydin and Tasci's assessment model. Finally chapter summary presented.

The seventh chapter make available the conclusion and contributions from the research findings. Following this, recommendations of the thesis presented. Finally, limitations of the study are outlined and directions for future research are proposed.

CHAPTER TWO

LITERATURE REVIEW

2.1. Knowledge

Knowledge is one of the most important impetus that supports and benefits one's organization in terms of putting itself in a better competitive advantage among other competitors. Hence, creating a sort of mechanism how to accumulate and put it in the right place comes to be nearby in order to consume it to organizational advantage. Moreover knowledge is a powerful leveraging factor that helps organization to win their own very objective in their activity and also becomes identity as well, (Moon and Desouza, 2011).

In light of Davenport and Prusak, (2000), "Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms."

According to Mayo and Lank, (1994), Knowledge is considered as a corner stone of the global economy in terms of transformation and its influence in the competitive advantage of an organization. As stated by Chen & Hew, (2015), Hemsley & Mason, (2013), it is a collection of information that can be used for decision-making and actions as well as it is an asset both for an individual and organization that is used to obtain competitive advantage. The competitive advantage of firms do not come out from market position they hold but from the knowledge that stands for themselves as their product as well as the manipulation of the existing knowledge to leverage the market to their particular interest. Alryalat and Alhawari, (2008), Knowledge is the comprehension of a processed information so as to enhance the understanding of purpose and way of solving problems and wisdom that includes the adoption of new activity to accomplish a particular purpose.

To understand the word “Knowledge”, it seems to mean three things. They are as follows (Nickols 2010):

- First, it refers to a state of knowing, by which to be acquainted, to be aware of, and to recognize facts, methods, principles, techniques. This corresponds to “know about.”
- Second, the word “knowledge” refers to “the capacity for action,” an understanding or grasp of facts, methods, principles and techniques sufficient to apply them in the course of making things happen. This corresponds to “know how.”
- Third, the term “knowledge” refers to codified, captured and accumulated facts, methods, principles, techniques.

From the aforementioned definitions, researchers concluded that knowledge in its wider application constitutes the real wealth for each of the individual or organization. Knowledge contributes to materialize organizations goal to be more efficient and effective manner and enhances the considerable improvement of the overall organizational performance, (Nickols).

In light of Epetimehin and Ekundayo, (2011), Knowledge is the insights, understandings, and practical know how that people possess and the fundamental resource that gives people the power to function intelligently. Knowledge is an invisible or intangible asset, which is earned through complex cognitive processes of perception, learning, communication, association and reasoning.

According to Wang and Noe, (2010), Knowledge basically refers to a collection/or a body of information that it could be is embedded in the form of theories, processes, systems, or it could be voiced in form of opinions, theories, ideas and analysis. Knowledge is a complex concept that lures many philosophers, researchers from other disciplines, and practitioners. But the common ground for all of professions is that knowledge is just more than the mere data and information. Wang and Noe, define knowledge as “information processed by individuals including ideas, facts, expertise, and judgment relevant for individual, team, and organizational performance.”

2.1.1. Types of Knowledge

Generally, knowledge could be classified in to explicit knowledge and tacit knowledge.

2.1.1.1. Explicit Knowledge

According to Ikujiro et al. (2000), explicit knowledge could be expressed in formal and systematic language and shared in the form of data, scientific formulae, specifications, manuals and the like as well as it could be processed, transmitted and stored relatively easily. Polanyi, M. (1974), Nonaka (1994), explicit knowledge refers to a type of knowledge that is being codified and transmitted in a formal and systematic language that comprises documents and information system. Moreover such knowledge is always exposed to constitutional transformation which enriches the content of a particular knowledge.

In light of Nonaka (1999), explicit knowledge is codified knowledge that can be transmitted into formal and systematic language. It is discrete or digital and is captured in records of past such as libraries, archives and databases. It could be expressed in terms of words or numbers and shared in the form of data, scientific formulas, specifications and manuals. It is also a kind of knowledge that readily transmitted between individuals formally and systematically in the organizations. C. Lee (2014), defined as "Explicit knowledge is referred to as the knowledge which has been articulated, codified and stored in certain mediums. According to him, the common form of explicit knowledge is manuals, documents, procedures and stories." Do to this, it is possible to articulate, codify and store as well as easy to share and distribute.

2.1.1.2. Tacit Knowledge

On the contrary, according to Ikujiro et al. (2000), tacit knowledge is highly personal and hard to formalize, subjective insights, intuitions and hunches fall into this category of knowledge. It is deeply rooted in action, procedures, routines, commitment, ideals, values and emotions and also 'indwells' in a comprehensive cognizance of the human mind and body. It is difficult to communicate tacit knowledge to others, since it is an analogue process that requires a kind of 'simultaneous processing'. Polanyi, M. (1974), Nonaka (1994), tacit knowledge stands for knowledge that is being integrated in human minds, in their particular field of experience along with something deep rooted in a sort of specific context.

According to Nonaka (1994), Nonaka et al. (2000), tacit knowledge is highly personal and hard to elucidate, it make it difficult to communicate and share with others. It is merely justifiable based on

individual's action and experience as well as principles, values or emotions he/she embraces, subjective, insights and intuitions. An individualistic quality makes tacit knowledge difficult to formalize and communicate. C. Lee (2014), Tacit Knowledge is "the aspects of knowledge that cannot be codified, but could be transmitted via training or gained through personal experience". It has been described as "know-how" and involves learning and skill but not in a way of written down form.

2.2. Knowledge Management

In light of Moon and Desouza, (2011), Management is defined as it involves motivating resources, both human and technologies to work in a harmonized fashion toward the achievement of organizational goals and strategies. Omotayo and Funmilola, (2015), it emphasized on the four critical activities: planning, organizing, and controlling and leading. They also suggest that management has to be understand how to deal with the three kinds of assets: action, people and information.

According to Baloh et al. (2011), Since Knowledge is the most essential ingredient of KM which there by implies that without the existence knowledge there would be no KM. Knowledge stands for a collection or a body of information which thereby information is either embedded in the form of theories, processes, systems or it could be found in the form of processes, ideas and analysis.

As stated by Tahir, et al. (2010), Knowledge Management is a highly interdisciplinary field that lures scholars and practitioners from many fields (philosophy, information science, library science, economics, management, sociology, engineering, among others). KM has developed as one of the most important areas in management practices and established as a basic resource for firms and economies as well as concerned with collection, distribution and efficient use of knowledge resources. It is a process of knowledge creation, validation, presentation, distribution and evaluation. It is also a human resource management tools than a technology based discipline that is not state of the art technology used to improve efficiency of the knowledge, rather it is a practice that people use to motivate, best utilize their knowledge, experiences and enhance the creativity through using the state of the art technology. Sepideh et al (2015) describe Knowledge management as a systematic and organized mechanism can lead organizations to the optimal use of knowledge that results an enterprise's knowledge related effectiveness. According to him when organizations are increasingly aware of the consequences of KM use, its necessity will become clear.

Malhotra & Galletta, (2005) stated that KM manipulates a process of identifying, capturing, retrieving, sharing and evaluating all enterprises information assets which include databases, documents, policies, procedures, and experience stored in individual's heads. According to them KM uses knowledge based management resources to connect people to people and people to information so as to create competitive advantage. KM is a systematic and integrated process of coordinating organization that involves activities of acquiring, creating, storing, sharing, diffusing and deploying knowledge by individuals and groups, in order to succeed organizational goals.

Omur et al. (2009), knowledge Management has numerous contribution to the success of an organization. Among the various attribution of KM, enhances proficiency of people and extensive advancement in the organization are a few to mention. Besides, it increases effectiveness of an organization. But the implementation of KM in an organization is not ease to achieve. It struggles with difficulties both from inside to outside of the organization. The effective implementation of knowledge management, which comprises capturing, codifying and storing of knowledge are the most difficult aspects of knowledge management.

Wiki (2010), Knowledge management is a broad idea that addresses a wide range of strategies and practices utilized as a part of an organization to identify, create, organize, represent, store, share disseminate, search, analyze and enhance it bits of knowledge and experiences. Such bits of knowledge and experiences include knowledge, which are embodied in individuals or embedded in organizational processes or practice. Rajesh et al. (2011), Knowledge management supports activities of planning, organizing, motivating and controlling of people, processes and systems in an organization in order to secure knowledge related resources are persistently enhanced and efficiently utilized.

Grover and Davenport, (2001), the application and integration of Knowledge Management is growing as an integral business activity in various organizations as they realize that competitiveness pivots around the effective management of knowledge. It can be thoroughly defined as "an emerging set of organizational design and operational principles, processes, organizational structures, applications and technologies that helps knowledge workers dramatically leverage their creativity and ability to deliver business value". Alhawari et al. (2012) stated KM is the process of capturing, developing, sharing, and effectively and efficiently using knowledge for business organization or any other field of business and science.

In light of Stankeviciute (2002), knowledge management activities are explained as a set of activities initiated and thereby actively supported by organization so as to ensure the efficient development and use of organizational knowledge. One of the most important component of the socio technical knowledge management system is knowledge management process that refers to something that can be done with knowledge in the organization.

A number of literatures are being performed on knowledge management that emphasis on different activities which involves in the process of knowledge management. To add to this end, Stankeviciute (2002) explained the multifaceted structure of knowledge management activities of identifying knowledge, scanning, organizing along with disseminating, transferring, acquiring and creating of new knowledge. Ae well he stated that knowledge management process is associated with the creation of new knowledge, the sharing and transferring of new and existing knowledge. In addition to that, capturing, storing, exploiting and measuring the impact of knowledge are part and parcel of knowledge management process.

In lights of Jennex (2005), The infrastructure of knowledge processes, information technology and organizational culture are critical factor of success for the effective implementation of KM. the other deciding factors for effective implementation of KM includes enhancement of suitable infrastructure, incorporate knowledge management system to organizational processes and information systems, organizational structure, organizational culture, senior management support, staff training, maintaining the institutional memory, creating a KM strategy, KMS security and creating motivation and commitment through the use of KM in the evaluation process.

Lambe (2011), the development of the discipline of ‘knowledge management’ (KM) emerged in the early 1990s within various ground, including business administration, public policy, information systems management, library science and information sciences and so on. Al-Adaileh & Al Atawi, (2011), KM is emphasized on the ways of providing the right information at right time, to the right person through using systematic ways which thereby augment the competitive advantage of the organization. Al-Adaileh & Al Atawi have explicitly suggested the difficulty that is encountered in management. He further stated Managing knowledge and managing in general, are complex endeavors that require manipulation of human, social, and economic systems that are only partially understood.

Hislop (2013) define knowledge Management as" an umbrella term which refers to any deliberate efforts to manage the knowledge of an organization's workforce, which can be achieved via a wide range of methods including directly, through the use of particular types of ICT, or more indirectly through the management of social processes, the structuring of organization in particular ways or via the use of particular culture and people management practices". Sucahyo, Y. G. et Al. (2016), knowledge management is the organization or management of knowledge in an organization in consequence it can be used to achieve organizational goals.

According to Lambe (2011), the significance of KM in a formal business activity and research discipline began with the publication of then KM classics between 1993 and 1998. The basic importance of KM relies on the economic vision of peter Drucker (1968). Drucker identified an emerging knowledge economy where knowledge would supersede both capital and labor as the primary source of competitive advantage. In Drucker's economic vision, knowledge workers participating in knowledge work are the key drivers of the economy.

2.3. Readiness in Knowledge Management

According to Mohammadi et al. (2009), KM readiness is the ability of an organization, department or workgroup to adopt, use and benefit from KM successfully. It is to a great extent dependent on readiness for change. As a result, KM readiness is vital for companies looking for to adopt KM to analyze their businesses to ensure its productive and valuable implementation. As well, Holt (2007) describes readiness for change as "a comprehensive approach that is simultaneously raised by content (what is changing), process (how change comes into force), context (the conditions under which change has occurred) and individuals (whom their features is being asked to change)".

As stated by Eby et al. (2000) assessment of readiness for KM needs attention regarding two important aspects of the change process; first the extent of existing capabilities of organization for KM implementation, and the second aspect is the changes that need to happen before the KM initiative begins as well as its empowers organizational leaders to be aware of potential gaps between their expectations, and the perception of change agents and members toward change.

Davidrajuh and Tvedteras (2006) argues that, readiness gives the impression about the country and its indices reflect if it is healthy and attractive environment for external investors. As well as it enables the

analysts to be engaged in quite customized investigations, in which customization can be achieved at the economic, industrial and organizational levels and also it provides policy makers with comprehensive scorecard of their economy's competitiveness investigations. According to them depending on their goals and results, there are a number of readiness definitions and different tools of assessment are used. It is vital to clarify the definition of readiness assessment before proceeding with any readiness assessment. Readiness has been defined in different ways:-

The origin of readiness lies in Lewin's (1947) of concept of unfreezing. Lewin argued that unfreezing necessitates breaking up satisfaction. Providing evidence that current habits, attitudes, and behaviors are no longer acceptable or appropriate would be the first step in changing an organization. Asian Pacific Economic Cooperation (APEC) (2000), readiness is defined as the degree to which an economy or community is prepared to participate in the digital economy. The value to a community of assessing its readiness lies in evaluating its unique opportunities and challenges. As indicated by Mundy & Musa, (2010), readiness of e- government requires the preparedness of a country to develop and adopt e-government in areas of technology infrastructure, development of human resources, as well as telecommunication infrastructure. It also denotes the willingness of a government to use advanced technology to improve the lives of its citizens.

As stated by Bakry et al. (2006) Among the most driving factors for using ICT and networking are their contribution in terms of saving time and cost, exploring new development opportunities, and paving the way toward building the digital economy and developing the knowledge society. According to them a recent study by the Center for International Development (CID) at Harvard University defined the term "readiness" as the "preparedness for the networked world".

Armenakis et al. (1993) identified two beliefs as critical components of change readiness: the belief that change is needed and the belief that the individual and the organization have the capacity to undertake change. This is supported by Holt and Vardaman (2013) argue that change readiness includes individual factors that reveal the extent to which individuals hold critical beliefs regarding the change, and recognize that a problem needs to be addressed. They also further emphasize and argues that individuals must be committed to support the change and perceives their work group or social environment as supportive of the change initiative.

According to Ford and Foster-Fishman, (2012), however, the ever increasing studies on organizational change has not given a clear picture how the various attitude-related constructs overlap or differ. There are some efforts that are tried to differentiate between resistance to change and change readiness which includes the work of Armenakis et al. (1993), who underline that creating readiness for change has most often been explained in related with reducing resistance to change. Moreover Ford and Foster-Fishman, single out that change readiness may act to diminish the likelihood of resistance to change, hence increasing the potential for change efforts to be more successful.

In lights of Huang et al. (2004), reputable agencies and researchers have identified the importance of readiness research through various readiness assessment. Readiness assessment is highly valuable since the competitiveness of countries is highly being associated with their readiness in improving service, create new opportunity and have competitive edge over other countries. The readiness for adoption of technologies by business enterprise are highly important factors for directing and improving relationship with their potential key stakeholders such as suppliers, customers, employees and investors.

Based on various literature review, the word "readiness" is used as the requisite for people or organization to change successfully, (Holt, 2000). Readiness for change is the extent to which an individual or individuals are cognitively inclined to accept, embrace, and adopt a particular plan to purposefully alter the status quo, (Rafferty et al., 2012). They also stated that E-learning readiness is how the organization is ready on several aspects to implement e-learning.

Based on the above literatures reviewed, readiness in Km is considered important since it creates new business opportunities and competitiveness as a whole. So readiness of Land Holding Registration and Information Agency for KM adoption is essential for the agency to be competitive in the networked economy.

2.4. KM Readiness Assessment Model

The present readiness models mainly concentrate on a private division setting as opposed to that of the general population. Haug et al. (2011) have assessed readiness on three levels strategic, system and data levels, even if not in an e-government context. Similarly they examined IT readiness in small and medium enterprises and investigate company, management and employee characteristics. Parasuraman (2000) showed that technology readiness index has likewise engaged on the private sector framework,

examining dimensions of optimism, innovation, comfort level and sense of security in industries such as the construction industry.

In lights of Asian Pacific Economic Cooperation (APEC) (2000), Readiness assessment can help to set up essential benchmarks for local examination by market and for national planning. Various present readiness assessment models differ in terms of objectives, procedures and results. This is to state that no assessment model is probably going to cover all points and convey the entire arrangement of required data. According to them existing readiness models don't cover all factors that impact on organizational e-government readiness in public sector especially those incorporated with organizational environment. Some readiness models consider factors including the quality of ICT infrastructure, stakeholder's expectations, and advantages accomplished from ICT implementation.

Among the numerous available conceptual models for readiness assessment, some models are presented as follow:

Ogunyemi A. (2012) stated that, the overall organizational readiness for adopting an emerging technology such as server virtualization is dependent on three variables namely: national e-readiness, industrial relationships and organizational preparedness. Moreover, two extraneous factors; i.e. internal resistance and external influence included.

Based on research by Armenakis et al. (1993), Armenakis & Harris, (2002) and a comprehensive review of 32 existing assessment tools on readiness for change. Holt, et al. (2007) proposed a theoretical framework of readiness for change that comprises four dimensions. Readiness for change was defined as a comprehensive attitude that is influenced simultaneously by content (i.e., what is being changed), process (i.e., how the change is being implemented), the context (i.e., circumstances under which the change is occurring), and the individuals (i.e., characteristics of those being asked to change) involved.

However, some empirical research on the aforementioned theoretical framework revealed that the four dimensions were not fully aligned with the suggested conceptual framework, as employees seemed to have difficulties distinguishing content from context. Holt et al., discussed further on giving note that change does not happen in a vacuum but always in a context. To avoid the above problem, he opted to blend content and context and coined the terms as "appropriateness". In addition, the dimension "process" which originally consisted of items regarding leaders' commitment to the change are renamed

as "management support". Eventually, the individual contribution are divided into two separate dimensions namely self-efficacy for change (employees' belief that they are capable of implementing a proposed change) and personal valence (employees' belief that the proposed change is beneficial to organizational members). Finally, Holt et al.'s (2007) research confirmed that appropriateness, management support, self-efficacy, and personal valence are the four dimensions that constitute readiness assessment tool for change.

Ifinedo (2005) classifies the indicators of readiness assessment in three main indicators as follows:

- Demand forces (culture, understanding and effectiveness, knowledgeable citizens);
- Measuring the supply forces (industry competitiveness, skilled workforce and investments) and
- Societal infrastructure (cost of living and pricing, advanced infrastructure and macro-economic environment).

Tanudjojo and Braganza, (2005) proposed a tool based on socio-technological dimensions included infrastructure (Physical infrastructure, required policies and technologies), knowledge structure (Formal structures, rules, routines and facilities) and cultural (Needed cultural and social concepts).

Jalaldeen, Karim and Mohamed Model, (2009), in their conceptual model, they includes the following readiness assessment factors: organizational culture, structure and IT infrastructure mentioned as main factors in KM readiness. And also there are three independent constructs in their model, KM infrastructure, effort expectancy which is influenced by organizational structure and IT infrastructure and also performance expectancy which is influenced by IT infrastructure and organizational culture.

Mohammadi et al. (2009) suggested five factors for IT sector companies for assessment of KM readiness. These are change vision, infrastructures, organizational structure, change support and knowledge culture.

Bakry (2004) develops a framework for readiness assessment model (STOPE) consisting of five categories as follows

- Strategy (ICT leadership and ICT future development plans);
- Technology (ICT basic infrastructure, ICT e-Services infrastructure, ICT provisioning and ICT support);
- Organisation (ICT regulations: government, ICT cooperation and ICT management);

- People (ICT awareness, ICT education and training, ICT qualifications and jobs and management of ICT skilled); and
- Environment (knowledge, resources and economy, organisation and general infrastructure).

Taylor and Wright (2004) mentioned 3 dimensions for organizational readiness assessment for knowledge sharing which contained the following: organizational climate, processes and infrastructures, and implementation strategy.

The Centre for International Development at Harvard University (2002) develops a five indicators model for readiness assessment as follows: Network access, Networking learning, Networked society, Networked economy and Network policy.

Budhiraja and Sachdeva (2002), a thorough investigation of 18 readiness models identifies five key categories of assessment criteria. Such as IT infrastructure, human resources, policies and regulations, environment (economic, political, cultural), and e-government (public websites and ICT usage by government).

Al-Osaimi, K., Alheraish, A., Bakry (2006), An Integrated STOPE Framework for readiness assessment, the integration of readiness assessment factors is considered to be of three levels.

- The first is the level of the main STOPE domains that is the readiness "strategy", "technology", "organization", "people", and "environment".
- The second is the level of the sub-domains, which are the main issues branching from each of the main STOPE domains and
- The third is the level of sub-sub-domains, which includes the issues associated with each of the sub-domains of the main domains.

Nagarajan, S., Ganesh, K. & Sundarakani, B. (2009), they developed a conceptual framework for readiness assessment that comprises people (Skills, leadership, culture/structure and exploitation), process (Processes, measures, explicit knowledge and tacit knowledge) and technology (Knowledge centers and infrastructure).

Currently, several readiness models are available to assess the level of e-readiness. According to Zaied et al. (2007), every single assessment model has a different fundamental goal and definition of e-readiness. Obviously, no model will fit every user's need. As a result, selecting the model should be in a

conscious way and with a clear understanding of the kind of results that any specific model is likely to result.

From the above literature review, there are several models for the readiness assessment. Among them, this study used a model which comprises Strategy, Technology, Organization, People, culture and Environment factors. This model adopted from the STOPE model (Bakry, 2004), that stands for Strategy, Technology, Organization, People, Environment and from Jalaldeen, Karim and Mohamed Model, (2009) model which contains organizational culture, structure and IT infrastructure.

2.4.1. Factors that are used for KM readiness assessment

2.4.1.1. Strategy

Strategy is defined as "a system of finding, formulating, and developing a doctrine that will ensure long-term success if followed faithfully", (Kvint, 2009). Strategy comprises setting goals, determining actions to achieve the goals, and mobilizing resources to execute the actions. It also can be proposed or can emerge as a pattern of activity as the organization adapts to its environment or competes.

According to Armenakis et al. (1993), for change to be exhaustively implemented, it demands management support. In their article "Crafting a change message to create transformational readiness," put much emphasis on management support since managers are responsible for creating the circumstances that allow change to take place (e.g., policies, procedures). Armenakis et al. (1993), Armenakis & Harris (2002), Holt et al. (2007), the attitude of change has to come from managers for their employees to pursuit the same track and thereby help full success of change need as well as minimize the risk of stalling the change effort.

K. Moller (2008) stated that a well-formulated business strategy provides focus and direction for resources utilization and business operations. Moreover, strategic thinking is critical for successful management of organizational knowledge for mass customization. Strategic formulation also provides the context for knowledge management through exposing external threats and opportunities and identifying organizational strengths and weaknesses. Such assessment will help an organization to specify its knowledge requirements, which in turn become the basis for subsequent knowledge management activities.

An increasing number of scholars argue that fundamental to any KM strategy is the organizational and individual readiness to accept and support it, otherwise as Mohammadi et al. (2009) point out, it might result in a significant loss of managers' time and energy in dealing with employees' resistance to KM, and failure to achieve its proposed goals. The employees' resistance and opposition is often the result of significant organizational changes required by KM strategy. Therefore, it is suggested that managers need to assess their organizations' readiness to adopt a KM system as a proposed change, prior to taking any definite decision regarding its implementation (Holt et al., 2007). Siemieniuch and Sinclair (2004) consider the KM readiness as critical precursor to the successful implementation of KM in different industrial settings.

2.4.1.2. Organizational Readiness

In light of Mohammadi (2010), organizational readiness for KM is readiness to identify, collect, organize, store, distribute, and share knowledge as well as the capability to adopt and use advantages that comes from KM. As stated by Holt (2007), organizational readiness comprises different cultural, structural, and technological aspects that includes individuals, context, content and process of change along with the tendency to knowledge management, confidence, and culture.

In respect to various literature review, the word "readiness" is used to explain the value that people and organization have to change successfully, (Holt, 2000). According to several researches that are performed on organizational readiness indicate that KM support organizations to assess their readiness for knowledge sharing before the KM implementation, (Siemieniuch, 2004).

It is crystal clear that attitude and perception highly affect organizational change efforts in the process of organizational readiness to change. Organizational readiness basically explains the organizational members' perceptions, beliefs, attitudes and expectations of the extent to which the organization is ready to and capable of introducing and implementing changes in order to improve organizational performance, (Armenakis et al. 1993, Weber & Weber, 2001). In addition to that, organizational readiness to change is similar to Lewin's unfreezing concept (Armenakis et al., 1993, Eby et al., 2000), which is a "process by which organizational members' beliefs and attitudes about a pending change are altered so that members perceive the change as both necessary and likely to be successful".

A number of literatures on organizational readiness for e-learning gives managers questions, guidelines, strategies, models and instruments for assessing the readiness of their companies for e-learning. Haney (2002) proposes that managers ought to ask themselves 70 questions for assessing their organizational readiness. She further classifies these questions into 7 categories which are Human resources, learning management system, learners, content, information technology, finance and vendor.

Chapnick (2000) has come up with tools for the assessment of organizational readiness for e-learning. In her work, she assumes her tools as organizational readiness for e-learning assessment model and states that the model helps to answer three main questions, (1) 'Can we do this?', (2) 'If we can do this, how… are we going to do it?', and (3) 'What are the outcomes and how do we measure them?'. Moreover, Chapnick claims that there are several factors that must be taken into account to assess readiness and also listed 66 factors in question format and groups them into 8 categories namely, psychological, sociological, environmental, human resources, financial readiness, technological skill, equipment as well as content readiness.

2.4.1.3. Technology

Technology is an imperative factor that can be effectively used to adapt a technological innovation in an organization (Rogers, 2003). Rogers stated that technology has two distinctive components: hardware and software, where as hardware is the part of technology that consists the physical components and software is the part that consists of the information aspects that use to undertake certain tasks. In overall, a company that is committed to implement and adopt e-learning has to meet e-learning hardware and software requirements to the minimal. The value of appropriate equipment and easy access are always mandatory to implement any e-learning. However, as Broadbent (2001) stated that e-learning does not require a huge infrastructure. Even a well working internet connection and supplying enough computers for end-users would be sufficient for an effective e-learning project.

Othman & Razali (2013) stated that the application of e-government or the use of technology in government services, has become a global issue in the areas of public sectors and economies. For a full scale manipulation, there is a need for global cooperation as well as knowledge and experience exchange in the areas. E-government adoption has to result high level of satisfaction for both citizens and businesses which thereby end with high satisfaction level in the e-government adoption rate. Besides, it ensures transparency in government operations as well as restore trust in governments. According to

their explanation, Information technology plays an important role in a firm's daily operations as well as imperative in its ability to create and sustain a competitive advantage. The application of IT greatly improves on the areas of information processing and coordination of activities in an environment that is exposed to uncertainty. Broadbent (2001) stated that Information technology is a multifaceted construct that is intended to address both IT and non-IT related sustainability problems.

Technology is the driving force for the adoption of e-government. As Alghamdi et al. (2011) has suggested an e-government framework for assessing the ICT readiness of government agencies in public sector organizations in developing countries. The recommended e-government framework comprises seven dimensions of ICT readiness assessment ranging from e-government organizational ICT strategy, user access, e-government program, ICT architecture, business process and information systems to ICT infrastructure and human resources. The dimension of ICT infrastructure comprises hardware, software, connectivity, security and operations. On the word of Zhu et al. (2006), Technology also can be defined as technology infrastructure and IT human resources,). As they stated technology infrastructure establishes a platform on which internet technologies can be established, IT human resources provide the knowledge and skills to develop web applications.

Technology readiness is a multifaceted psychographic construct that refers to the tendency of customers to embrace and use new technologies for accomplishing goals, (Parasuraman, 2000, Parasuraman & Colby, 2001). According to them technological readiness, which investigates the access to the internet and the intranet provided, the existing technological systems and the way they are used as far as e-learning is concerned.

As stated by Parasuraman (2000) research work, he used the term technology readiness as being "people's propensity to embrace and use new technologies for accomplishing goals in home life and at work". According to him, it is a state of mind resulting from "mental enablers and inhibitors the collectively determine a person's predisposition to use new technologies". According to him each individual could be affected either by negative or positive feelings towards technology. Following an extensive empirical investigations, four dimensions of Technological Readiness are suggested namely discomfort, insecurity, optimism, and innovativeness, According to Parasuraman, discomfort is described as the perceived lack of control and a feeling of being overwhelmed by technology, Insecurity is the result of a lack of trust in technology and its ability to work properly, Optimism relates to have a

positive view of technology, comprise customer beliefs of control, flexibility, convenience and efficiency as well as innovativeness is defined as the tendency to be a technological pioneer.

According to him, the first two technology readiness dimensions, "optimism" and "innovativeness" are the "contributors" that may increase an individual's technology readiness, while the other two dimensions; "discomfort" and "insecurity" are "inhibitors" that may suppress technology readiness. The combination of scores on the four technology readiness dimensions represents a person's overall technology readiness. Technology readiness translates the overall mental state of an individual with respect to technology in general. It is a combination of beliefs and feelings related to technology that, together, determine an individual's overall predisposition to adopt technology products and services.

2.4.1.4. People

The very decisive factors for thoroughly bring changes the human component of resource that are either embrace or resist change. Therefore, it is vital to assess individual's readiness perception prior to any change attempt (Holt et al., 2007).

According to Armenakis & Harris (2002), Holt et al. (2007), personal valence refers to whether or not the individual understands the change to be personally valuable, which depends on the priorities the individual possess and what is considered important for him or her. Parasuraman (2000) discussed that, since the application of technology is expanding in the area of service delivery, it is important to understand customers' readiness to use technology-based systems namely Web and/or wireless Web. Lee, 2010 indicated it is a common phenomenon that people usually shows resistance to adoption of new technologies in an organization. Server virtualization adoption often fails due to the fact that top executives, application owners and IT staff do not have the same interest into a particular technology and/or a lack of change readiness

The characteristics of all human resources of a company is dealt as people factor. In the light of Literature by Jacobs & Washington (2003) manifests that whenever the organization's human resources are given more skill centered training, the more likely the organization is going to be successful. Moreover, Rogers (2003) mentions that individuals who have a high level of education are easily adopt an innovation than others. Hence, education levels of employees is taken as indicator for e-learning readiness. Beside, Rogers expresses that "earlier adopters have greater knowledge of innovation than do

later adopters". According to the above generalizations, it can be claimed that companies with more skilled human resources personnel have a better chance to succeed at e-learning readiness.

According to Parasuraman and Colby (2001), depending on individual's technology readiness score and the technology readiness index, further categorized technology customers into five technology readiness segments, namely, explorers, pioneers, skeptics, paranoids, and laggards. They identified that "explorers" are highly optimistic and innovative, "Pioneers" are relatively early adopters of new technology but are simultaneously held back by inherent discomfort and insecurity, "Skeptics" are fairly techno-ready, "Paranoids" are the insecure and later adopters of new technology as well as "Laggards" are the resistant and likely the last adopters of new technology. Prior studies found that explorers and pioneers are high in technology readiness and tend to embrace new technology earlier than the others.

A lot of literatures manifest the close link that individuals have with new technologies. They in-depth suggest that consumers concurrently present, perceptions, beliefs, feelings and motivations that are both positive and negative with respect to new and existing technology and technology oriented services. Consumers with technological backgrounds would be receptive new and existing technology and technology oriented service. On the contrary, consumers that have negative outlooks of technology would be resistant to technology and technology oriented services, (Rogers, 2003). According Rogers to individuals have different personality and attitudes toward the use of technology which result in technology readiness acceptance of new and existing information technology and systems.

The magnitude of acceptance of technology readiness indicates a person's openness towards technology. Among the decisive drivers of technology readiness are optimism and innovativeness since they motivate individuals to use technological products and services as well as they manifest a positive attitude towards technology. In vice versa, discomfort and insecurity stands for negative as well as they make customers reluctant or have less intention to adopt new technology (Yen H.R., 2005).

2.4.1.5. Culture

According to Taylor & Wlright (2004), the two cultural dimensions, which are related to KM readiness in a quantitative study of public sector organizations are open leadership climate and learning from failure. In general, it appears that aspects of the internal context (i.e., organizational culture) were very appropriate indicators of KM readiness.

In light of M. Handzic, O. Lazaro, and C. Van T. (2004), Culture is commonly understood as a set of shared values, beliefs, customs, practices, principles and routines that underpin the behavior of an organization and its members. It act as enabler to encourage the sharing of knowledge. According to H. Park et al. (2004), cultural change is a difficult and frustrating process to organization and might take a long period of time since it comprises changing the hearts, minds, emotion and work practice of the organization's members.

In light of Ansari H. et al. (2012), Organizational culture offer the required bases for sharing knowledge during implementation of KM and encourage its creation and share concentrating on the value of knowledge. It also prepare a trust context based on cooperation within the organization. As stated by Riege (2005), Knowledge implementation culture depends on the synergy of motivation, encouragement, and stimulation of individual employees to capture, disseminate, transfer, and apply existing and new generated knowledge, especially tacit knowledge.

In light of Jumeri N and Nor'ashikin (2015), cultural readiness is described as the culture of the organization and its members are ready, willing and prepared in facing organizational change as well as It is a pre-condition of an organization and their members to succeed in facing organizational change. It is important to do an assessment to realize the level of organizational culture and the employee's readiness to implement KM initiatives through the willingness to share their knowledge.

2.4.1.6. Environment

According to David Colton (2016), Physical environment relates to actual physical factors, such as square footage, ventilation, temperature, lighting, noise, and odors, as well as the way that staff and clients experience the environment. Although the literature suggests that addressing issues related to the physical environment may make the setting safer, there is not as yet empirical evidence to demonstrate a causal link between environment factors and an actual reduction in the use of seclusion and restraint.

In light of Lee & Kim (2001), Knowledge management process is divided into accumulation, integration, and reconfiguration. The accumulation of knowledge can be achieved through the acquisition of knowledge from external sources and internal creation. The major management processes are integrating and reconfiguring them according to the environmental changes,

The environmental context accounts for the organization's business areas, including industry, competitors, relationship, and government policy, (Tornatzky & Fleischer, 1990). According to them, in addition, it elaborates the impediments, chances and opportunities for innovation.

CHAPTER THREE

3.1. Research Model and Hypothesis Development

The hypothetical center of this study is to identify the variables affecting KM adoption and to assess the readiness of the Land Holding Registration and Information Agency for adopting KM. Currently, several readiness models are available to assess the level of e-readiness. According to Zaied et al. (2007), every single assessment model has a different fundamental goal and definition of readiness as well as no model will fit every user's needs.

Among the several available models discussed in the literature review and others , this study used a model adopted from the STOPE model (Bakry, 2004), that stands for Strategy, Technology, Organization, People, Environment and from Jalaldeen, Karim and Mohamed Model (2009), model which contains organizational culture, structure and IT infrastructure .

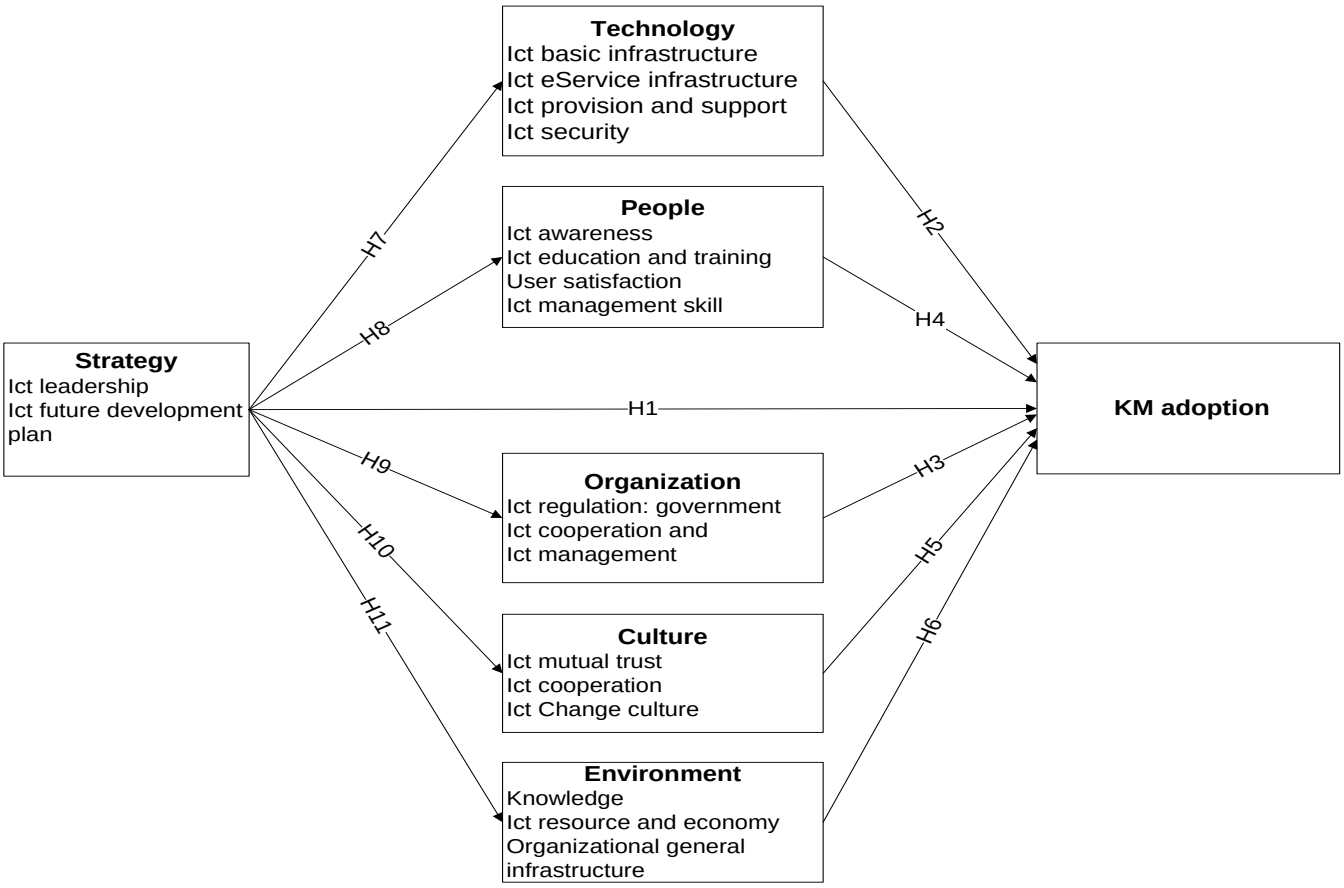


Figure 3.1 Research Model

(Adopted from the STOPE model (Bakry, 2004), and Jalaldeen, Karim and Mohamed Model, (2009)).

3.1.1. Hypothesis Development

A research conducted by Alanazi, S. & Christian, B. (2016) with a title of "Knowledge Management Readiness in Organizations". This research was conducted with the intention to develop a well-justified and all-inclusive model for assessment of readiness for KM implementation. The respondents in this study revealed that their organizations delivered utmost significance in managing business intelligence through defined strategic programs as well as the management was also reflected as strong committed to identify the right knowledge to facilitate KM Readiness. As per the results obtained from this research, Strategic program was observed as directly associated with the KM adoption.

The study conducted by Manoucher A. et al. (2012) under the title, "A Conceptual Model for Success in Implementing Knowledge Management:" A Case Study in Tehran Municipality. Strategies that composed of principles and plans within the organization are related to Knowledge management along with Leadership has a concept dependent on KM strategy and also application of KM requires supports from senior management. The finding of this research showed that strategy has a positive impact on KM Readiness in Tehran Municipality.

The research work done by Nagarajan S. et al. (2009) with the title, "Organizational readiness assessment framework and model for knowledge management" indicated that, KM strategies helps the organisation to develop readiness assessment approach that are linked to its business strategies. The organisation will be able to plan effectively for future KM activities. It successfully develops a detailed KM project plan to reserve appropriate resources and manpower for KM implementation and monitor the progress of various KM activities. The result of this research revealed that strategy which is called KM strategy, positively and significantly related to KM adoption.

Bryson (2011) stated that the phrase "strategic planning" refers to a methodical approach and working guidance for required steps in decision making. Chin et al. (2009), Strategic management contains vision, values and goals, business strategy, and organizational procedure. An organization that has better and well-prepared strategic planning is likely to have better KM adoption and practice. The strategic direction of the organization and knowledge strategies provide a suitable framework for organizational readiness to adopt KM. Based on the above description, it is examined by the next hypothesis:

Hypothesis1 (H1): KM Strategy has significant impacts on KM adoption.

According to a research conducted by Rooholah, R. et al. (2014) in Tehran, Iran by the title "Assessing organizational readiness for knowledge management system implementation" (case study: department of information technology development at the ministry of industry, mine and trade), revealed that technology factors has got the first rank among other factors and it is significantly related to knowledge management implementation. This result of the study revealed that technology has a positive effect on KM readiness in Tehran.

A research conducted by Alanazi, S. & Christian, B. (2016) with a title "Knowledge Management Readiness in Organizations" was undergone with the intention to develop a well-justified and all-inclusive model for assessment of readiness for KM adoption. The findings of the study revealed that technology tools for communication was perceived as directly associated with Readiness for adopting KM. As per the result obtained, Technology was directly related with the KM adoption.

A research work done by Ogunyemi et al. (2012) with the intention of exploring the roles of technology in organizational readiness for emerging technologies showed that technology play the major roles in the KM adoption process. The result of this research revealed that technology in organizations contribute more significantly and positively to the overall organizational readiness.

A research conducted by Sucahyo, Y. G. et al. (2016) in Indonesia under the title of "Knowledge management adoption and its impact on organizational learning and non-financial performance ". In this research, a total of 139 respondents were participated which represents 51 companies. The Respondents comprise of staff, senior staff, KM team, manager, and other higher level position who understand KM implementation in their organization. Based on their final analysis, IT infrastructure has a direct impact on KM implementation. This revealed that technology was the factors that significantly influence KM adoption in an organization.

In light of Lawson et al. (2007), Information Technology application is an essential factor in KM adoption, mainly in network connection, electronic database, communication devise, analysis and decision making tools, and knowledge management systems. Huang et al. (2011), the Technology adoption model proposed that has IT support impacts on KM adoption through the existence of complexity as an intermediary. This description showed that technology has a strong relationship with KM readiness. Based on the above literatures reviewed, the following hypothesis is developed.

Hypothesis2 (H2): Technology has significant impacts on KM adoption.

A research work done by Abiodun et al. (2012) under the title "Towards an organisational readiness frame work for emerging technologies: an investigation of antecedents for South African organisation's readiness for server virtualization ". In this research, 120 organizations participated in the survey and 83 organizations cutting across sectors banking and finance, IT, telecommunications, government, retail, education and research and manufacturing have adopted and implemented server virtualization. The result of this research revealed that Organisational preparedness significantly and positively contributes to the overall organisational readiness and has a moderate effect on the overall readiness of organisation for emerging technologies.

According to Holt et al. (2007), the "organization" domain integrates the factors related to the "current state of issues concerned with ICT regulations and management". There are factors that have impact on readiness for KM adoption: organization, physical and logical infrastructures, such as IT and organizational structure are considered influencing factors for KM adoption,

According to Cetindamar et al. (2009), the availability of physical and logical infrastructures in the organization (IT infrastructure) and the willingness (positive attitudes) of the organizational members are factors that have impact on the KM adoption, as well as organizations must have standard IT policies and top management commitment that will enhance adoption and upgrade to new systems to meet changing business needs. Base on the above clarification, organizational readiness will be investigated by hypothesis 3 as follow:

Hypothesis3 (H3): organization has significant impacts on KM adoption.

A research work done by Azab et al. (2009) with the title of "A Suggested Framework for Assessing Electronic Government Readiness in Egypt". The motivation of this study is on the internal factors affecting Electronic Government Readiness (EGR) in a public organization in Egypt. It is a contextual specific single-site empirical study in cooperation with Montaza District (MD), Alexandria. The total number of respondents were 81 employees, and the number of invalid responses were 10, which constitutes a response rate of 87.6%. This study reveal the effect of people on EGR has the highest weight, ensuring that people is the major factor in the success of any information system. That means people has a strong positive impacts on success of readiness for KM adoption.

A Research Conducted by Sepideh et al. (2015) in Tehran, Iran, in the Title of "Assessing The Organizational Readiness For Implementing Knowledge Management in Organizations " Revealed that Individual/People has a Positive effect on educational organization's readiness for KM implementation.

From the literature reviewed, Moffett (2003), Individuals' skills, roles, knowledge, motive, reinforcement, learning, social networks, contacts, coordination, and creativity are effective on the KM implementation. According to Becerra-Fernandez & Sabherwal (2010), people factors are important to the successful adoption of KM, since the most knowledge is stored in people's minds in the form of tacit knowledge within the organization and is often unstructured. Due to the above description, individuals/people has positive influence on readiness for knowledge management implementation.

In light of the research conducted by Jennex, & Zynger (2007) in the concept of KM, the readiness of organisational members for knowledge management adoption should be assessed not only as technical concept, rather than as a fusion of socio technical concept. According to them, the term 'workforce' includes the people who possess the ability and the willingness to effort for adopting KM. This revealed that, the readiness of people to adopt knowledge management is a crucial issue.

Ogunyemi et al. (2012) carried out a research with the title of "Exploring the roles of people, governance and technology in organizational readiness for emerging technologies ". The research was conducted on 124 organization found in South Africa. The result of this research suggest that people play the major roles in the adoption process. It showed that people in organizations contribute more significantly and positively to the overall organizational readiness.

Hypothesis4 (H4): people has significant impact on KM adoption.

A research work done by Bridget Abiagam and Abel, U. (2012) by the title "Knowledge Management Adoption and Culture in the Hospitality Industry of Nigeria", University of the West of Scotland, UK. According to this research, a conducive culture has to be developed and maintained by managers to encourage the adoption of knowledge management. Consequently, we find a positive causal relationship between culture and intention to KM adoption.

A research conducted by Sucahyo, Y. G. et al. (2016) in Indonesia under the title of "Knowledge management adoption and its impact on organizational learning and non-financial performance ". In this

research, a total of 139 respondents were participated which represents 51 companies. The Respondents comprise of staff, senior staff, KM team, manager, and other higher level position who understand KM implementation in their organization. The result of this study proved influential factors which affect knowledge management adoption intention and practice of organization in Indonesia. As a result, they concluded organizational culture supports KM practice in an organization as well as similar to previous studies, organizational culture significantly influences perceived usefulness of KM implementation.

In lights of Parag (2009), An important elements of achievement in knowledge management is creating an organisational culture that can motivate, support and encourage capture, create, share, codify and reuse of knowledge at any level that includes an individual, group and organisational levels. An organisation's culture make available order and structure for knowledge management activities.

Ansari et al. (2012) carried out a research on the title "A Conceptual Model for Success in Implementing Knowledge Management:" A Case Study in Tehran Municipality. The practical results obtained from this research revealed that Organizational culture must be able to provide the required bases for creation, sharing the knowledge and also prepare a trust within the organization in KM implementation.

Research conducted by Farshad et al. (2001) by the title "Effect of organizational factors on knowledge management in education: A case study in West Mazandaran Province, Departments of Education." The statistical population of this research includes all the employees of West Mazandaran Departments of Education. A total number of 385 employees were considered as the basis of analysis with the use of simple random sampling method. As the results of this research show, organizational culture variable and all its dimensions have a positive and significant effect on knowledge management performance and its establishment.

Hypothesis5 (H5): Cultural has significant impact on KM adoption.

According to Davenport et al. (1998), "environment" domain integrates the factors associated with the "current state of the basic non-ICT issues surrounding and affecting the current state of ICT". The domain has four sub-domains: "knowledge", "resources and the economy", "organization" including general regulations, cooperation and management and the basic "non-ICT infrastructure". Top management or leaders ought to dedicate themselves to promoting a company mindset that underlines co-operation and knowledge sharing across the organisation as well as they ought to contribute to the

creation of an environment in which knowledge creation and cross-boundary learning can succeed. It is important for them to provide consistent support and commitment to initiate and manage the KM effort.

According to Organization for Economic Co-operation and Development (OECD) (2002), Thought of resources' accessibility as well as their proper allocation and management are accordingly important for small and medium-sized enterprises (SMEs) in adopting KM. The effect of environment on KM adoption leads me to the nest hypothesis.

Hypothesis6 (H6): Environment has significant impact on KM adoption.

The research conducted by Azab et al. (2009) argued that all four factors: technology, organization, people, environment are affected by e-Government strategy since this strategy comprises a number of aspects that cause major changes in the stated factors. The result of the study revealed that, an efficient e-government Strategy has a great impact on Technology readiness to adopt new technology.

Hypothesis 7 (H7): Strategy has significant impacts on technology readiness in the organization.

According to Jalaldeen et al. (2009), organizational culture, realize the value of Knowledge management and the association of Knowledge management strategy with the organizational strategy, should have positive relationship with the performance expectancy.

According to Lee (2010), E-government strategy "it is essential for effective e-government implementation. A strategic plan provides a roadmap for an organization to move from its current state to its desired medium or long term future state". This showed that strategic plan and organization has a strong relationship.

The research conducted by Azab et al. (2009) argued that all four factors: technology, organization, people, environment are affected by e-Government strategy since this strategy comprises a number of aspects that cause major changes in the stated factors. The result of the study revealed that, an efficient e-government Strategy has a great impact on organization readiness to adopt new technology. Therefore, I proposed the following hypothesis:

Hypothesis 8 (H8): Strategy has significant impacts on organization readiness in the organization.

A research conducted by Azab et al. (2009) under the title "A Suggested Framework for Assessing Electronic Government Readiness in Egypt". The motivation of this study is on the internal factors

affecting Electronic Government Readiness (EGR) in a public organization in Egypt. It is a contextual specific single-site empirical study in cooperation with Montaza District (MD), Alexandria. The total number of respondents were 81 employees, and the number of invalid responses were 10, which constitutes a response rate of 87.6%. This research indicate that IT strategy has a strong impact on employees' behaviors due to the hierarchical structure of the public sector which drives people to respond to changes approved by top management. This showed that the positive impact of strategy on people to respond to changes.

According to the study conducted by Azab et al. (2009), the study argues that all four factors: technology, organization, people, environment are affected by e-Government strategy since this strategy comprises a number of aspects that cause major changes in the stated factors. The result of the study revealed that, an efficient e-government Strategy has a great impact on People readiness to adopt new technology. Based on the above research results revealed, the following hypothesis proposed.

Hypothesis9 (H9): Strategy has significant impacts on people readiness in the organization.

A research conducted by Seyed et al. (2012) under the title "Relationship between Organizational Culture and Strategy Implementation: Typologies and Dimensions ", Tehran, Iran. This research is a survey to investigate relationship between typologies and dimensions of organizational culture and strategy implementation in Iranian Karafarin Bank. The findings provide support for H2 which suggest that strategy implementation are significantly related to all dimensions of organizational culture . Based on the above, I proposed the following hypotheses:

Hypothesis10 (H10): Strategy has significant impacts on cultural readiness in the organization.

According to the study conducted by Azab et al. (2009), the study argues that all five factors: technology, organization, people, culture, environment are affected by e-Government strategy since this strategy comprises a number of aspects that cause major changes in the stated factors. The result of the study revealed that, an efficient e-government Strategy has a great impact on environment readiness to adopt new technology. Based on the above research results revealed, the following hypothesis proposed.

Hypothesis11 (H11): Strategy has significant impacts on environment readiness in the organization.

CHAPTER FOUR

4.1. Introduction

This chapter, presented the research methodology of the study. It focused on the research philosophy, research design, study area, population of the study, sample, Sampling Technique and Sample Size, data collection method, quality of the measures, data analysis and ethical consideration. Lastly, this chapter finalized with a summary of key points.

4.2. Research Philosophy

Researchers base their work on certain philosophical perspectives; it may be based on a single or more paradigm(s), depending on the kind of work they are doing. According to Cohen et al. (2000), Research philosophy can be defined as the broad framework, which comprises perception, beliefs and understanding of several theories and practices that are used to conduct a research. It can also be characterized as a precise procedure, which involves a researcher creates a relationship between the research objectives and questions. Saunders and Thornhill (2007) describe that Research philosophy is the development of the research background, research knowledge and its nature. There is no consensus between philosophers about the best ways of understanding the world; as a result, clarifying the philosophy needs to have clear understanding of the research problem chosen.

According to TerreBlanche and Durrheim (1999), the two major research philosophies of worldviews have been identified, namely positivist (sometimes called objectivistic) and interpretivists (also known as constructivist). These different ways of seeing the world have impacts in most academic areas.

4.2.1. Positivism

Positivism is directly related with the idea of objectivism that the researchers provide their perception to evaluate social world objectivity (Cooper and Schindler, 2006). According to this paradigm, researchers are interested to collect general information and data from a large social sample instead of focusing details of research and also researcher's own beliefs have no value to effect the research study. The positivism philosophical approach is mainly related with the observations and experiments to collect numeric data (Easter-by-Smith et al., 2006).

In light of Easter-by-Smith et al. (2006), positivists use validity, reliability, objectivity, precision, and generalizability to judge the accuracy of quantitative studies as they intended to describe, predict, and verify empirical relationships in relatively controlled settings. the positivist researchers' stress on clarifying behavior through measurable data by using standardized tools such as questionnaire and exactly worded questions.

Collins, H. (2010), Positivism concerned about the "factual" knowledge gained through observation, including measurement and are trustworthy. In positivism studies, the role of the researcher is limited to data collection and interpretation through objective approach and the research findings are usually observable and quantifiable. The researchers are independent from the study. There is no provision for human interest within the study. According to Collins, H. positivist studies commonly adopt deductive approach and the researchers need to concentrate only on facts.

4.2.2. Interpretivism

Interpretivism is a philosophical approach in which, researchers give importance to their beliefs and value to provide adequate justification for a research problem (Easterby- Smith et al., 2006). In this approach, researchers focus to highlight the real facts and figures according to the research problem and also use small sample and evaluate them in detail to understand the opinions of large people (Kasi, 2009). According to Willis (2007), the idea of multiple perspectives comes from the belief that external reality is variable and also he indicate that "different people and different groups have different perceptions of the world". The acceptance of multiple perspectives in Interpretivism leads to a more comprehensive understanding of the situation.

Willis (2007) states that "interpretivists tend to favour qualitative methods such as case studies and ethnography". In light of Willis, qualitative approaches regularly provide reports that are necessary for interpretivists to fully understand contexts. According to Creswell (2009), interpretivists view the world through a "series of individual eyes" and choose participants who "have their own interpretations of reality "to" encompass the worldview and quantitative methods are not the preferred mode of Interpretivism. He also states that "qualitative research is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem".

4.3. Research Design

Research design is type of investigation within qualitative, quantitative, and mixed methods approaches that provide specific direction for procedures in a research, (Denzin &Lincoln, 2011). Quantitative research involves the collection of data that can be quantified and subjected to statistical treatment in order to support or counter "alternate knowledge claims" (Creswell, 2003). In a quantitative study any number of strategies can be adopted when collecting data and these can include interviews, questionnaires, and observational tools. He states that questionnaires are the most commonly used data gathering instruments and consist mainly closed questions with a choice of fixed answers.

On the other hand, the qualitative research permits the researcher to explore and better understand the complexity of a phenomenon. It is an effective model that occurs in a natural setting that enables the researcher to develop a level of detail from being highly involved in the actual experiences (Creswell, 2003). In qualitative research, it is possible to monitor data collection as the project progresses and altering sample size within agreed limitations if need be on theoretical or practical grounds, (Silverman, 2010).

Mixed research method of both quantitative and qualitative designs in the same research study, evolved in response to the observed limitations of both quantitative and qualitative designs, (Venkatesh et al., 2013). This research is intended to the assessment of readiness for adopting Knowledge Management on getting organizational change in land hold registration and information agency. For this study quantitative research method was used and the correlational research design is adopted. The correlational research design is a Nonexperimental form of quantitative research design in which researchers use the correlational statistic to describe and measure the association between two or more variables, Venkatesh et al.

4.4. Study Area

Land Holding Registration and Information Agency (LHRIA) was established in 2010 through the Addis Ababa City Government Proclamation Number 22/2010 and 33/2010 with the name of Immovable Property Registration and Information Agency /IPRIA/. Computerized Land Information system has been developed by Addis Ababa City Administration which is called AA-CADIS a Cadastral Information System for the provision of quality service to city residency. According to the Population

Affairs Coordination Sub process Finance and Economic Development Bureau (October, 2009), based on the result of the 2007 national census, the population of Addis Ababa is estimated to be 2,738,248, from the total population, 48 percent are males and 52 percent are females.

4.5. Population of the Study

A research population is a well-defined collection of all the objects, individuals or members that are well-known to have a common, binding characteristic or feature, (Polit and Hungler, 1999). The target population is the total group of individuals from which the sample be drawn, (McLeod, S. A., 2014). In line with McLeod, S. A., population is all the individuals or units of interest; typically, there is no available data for all individuals in a population.

The targeted population in this study contained some employees of Land Holding Registration and Information Agency (LHRIA). According to LHRIA human resource management (HRM) department, March, 2017, LHRIA has a total of 835 employees. Out of 835 employees, 597(71.5%) are male and 238(28.5%) are female employees and also from the total employees, 265 are contract and 570 are permanent. The source of population for this study consists of all employees and leaders working in head and branch offices of LHRIA that met at least the minimum inclusion criteria set in order to get detailed and significant information about the readiness of LHRIA for adopting knowledge management. Out of 835, 310 employees were fulfill the minimum inclusion criteria.

	Permanent Employees				Contract Employees				Total
	Core processor		Supporting staff		Core processor		Supporting staff		
	Male	Female	Male	Female	Male	Female	Male	Female	
Head quarter	36	7	17	38	4	2	0	1	105
Sub city	303	90	34	45	196	54	7	1	730
Total	339	97	51	83	200	56	7	2	835

Table 4.1. Total employees of LHRIA

4.6. Sample

Sample is a subset of a population that is used to represent the entire group as a whole. When doing research, it is often impractical to survey every member of a particular population because the total number of people is just too large, (Goodwin, C.J., 2010). Along the lines of Goodwin, C.J., Sample is a portion of the individuals in a population; there is data available for individuals in samples.

The sample population for this study was determined from the head office and all branches offices in sub cities. The sample population category was all leaders and office workers who fulfill the following inclusion criteria.

Inclusion and Exclusions Criteria

Inclusion Criteria: - All employees of LHRIA working in IT, cadaster, land registration, Finance and supply, human resource management (HRM) department, branch office managers and director and all deputy directors of LHRIA with a minimum qualification of degree having any field of study and who are permanent employee with any years of experience were included in the study. This inclusion criteria is designed to help for easily understanding of the research measurement by the respondents.

Exclusion Criteria: – Employees of all offices of LHRIA who do not fulfill the inclusion criteria (i.e. degree and permanent employee) were excluded.

The respondents are expected to offer relevant information for this research by easily understanding the questionnaire developed for this research work, because of their work exposure at the core activities in LHRIA and their qualification level, as well as due to their concern with knowledge and knowledge-related activities of LHRIA.

4.7. Sampling Technique and Sample Size

4.7.1. Sampling Technique

Sampling is the selection of some part of an aggregate or population on the basis of which a judgment or inference about the aggregate or totality is made, (Kothari. 2004). It is the process of selecting units (e.g., people, organizations) from a population of interest so that by studying the sample we may

objectively generalize our results back to the population from which they were chosen, (William M.K. Trochim, 2006, McLeod, S. A., 2014).

According to Kothari (2004), the sampling technique is classified in to probability and nonprobability sampling techniques. Probability sampling techniques is a technique where all parts of population has equal chance of being selected as a sample. On the other hand, nonprobability sampling technique is a technique that does not give to all units of the population equal chance of being selected as a sample.

In this study, due to the organizational structure and educational diversity of employees of LHRIA, a Probability sampling techniques of stratified sampling and systematic random sampling techniques are used.

In advance of sample size determination and actual sample selection from the population, all LHRIA employees who fulfill the minimum inclusion criteria set are stratified in to three strata. The director, all deputy directors and branch office managers of the agency as the first stratum Officers working in IT and cadaster department as the second stratum, while, officers working in registration, HRM and finance department as a third stratum. The position and educational diversity of employees was the main criteria for stratifying the population study. These sampling techniques are significant to come up with more reliable and better research result. The systematic random sampling is used to select the sample from each stratum.

4.7.2. Sample Size

According to Kothari (2004), sample size refers to the number of items to be selected from the universe. The size of sample should be optimum, neither to be too large, nor too small. A sample that is too big will lead to the waste of precious resources such as time and money, on the other hand, a sample that is too small will not allow to gain reliable perceptions. An optimum sample is one which satisfies the requirements of efficiency, representativeness, reliability and flexibility. While deciding the size of sample, researcher must determine the desired precision as well as acceptable confidence level for the estimate.

Smith and Scott (2013) indicated that sample size depends on various factors like size of population, the nature of population, kind of study. It is an important feature of any empirical study in which the goal is to make inferences about a population from a sample.

Daniel (1999), the purpose of the calculation is to determine an adequate sample size to estimate the population prevalence with a good precision. According to him, when the calculated sample size is smaller than or equal to 5% of the population size ($n/N \leq 0.05$), $n = Z^2P(1-P) / d^2$ simple formula on the other hand when this proportion is larger than 5% ($n/N > 0.05$), $n' = NZ^2P(1-P) / d^2(N-1) + Z^2P(1-P)$ population correction formula is used to calculate the sample size of the finite population. For this study, the sample size was larger than 5% of the population that helps to get representative sample size, Daniel. Hence Daniel's simple formula was used:

$$n' = NZ^2P(1-P) / d^2(N-1) + Z^2P(1-P)$$

Where n' = sample size with finite population correction,

N = Population size, N is equal to 310.

Z = level of confidence of 95%, Z value 1.96,

P = expected prevalence or proportion is 20%, p is equal to 0.2, (Naing et al. 2006), and

d = precision (in proportion of one), d is equal to 0.05.

$n = 310*(1.96)^2*0.2(1-0.2) / 0.05(310-1) + (1.96)^2*0.2(1-0.2)$

n=137, as a result, this study used 137 sample from the target population.

4.8. Data Collection Method

Data originally collected for a different purpose are often used to address a research question. There are two types of data: primary and secondary data. Primary data are new information collected for the first time by a researcher himself. Whereas Secondary data are information already collected by others or somebody else and later used by a researcher, (Kothari, 2004). In this study primary data collected through questionnaire.

4.8.1. Questionnaires

Questionnaires are one of the primary sources of obtaining data in any research work. According to Richards & Schmidt (2002), during designing a questionnaire, the researcher should ensure that it is "valid, reliable and unambiguous". As stated by Mohammad Zohrabi (2013), there are three types of

Questionnaires: closed-ended (or structured) questionnaires, open-ended (or unstructured) questionnaires and mixture of closed-ended and open-ended questionnaires. Closed-ended questionnaires provide the inquirer with quantitative or numerical data and open-ended questionnaires with qualitative or text information.

The questionnaire was closed ended (structured) question. It has three sections, section one contains information about the study and consents. Section two contains of a number of items to gather data regarding demographic characteristics of the respondent such as gender, age, level of education, service year and department. Section three of the questionnaire was designed to assess strategy, people, organization, technology, Culture, and environment readiness towards KM adoption.

4.8.2. Questionnaire Development

For this quantitative study, structured questionnaire was adapted from Amare A. (2011), Selamawit A. (2014), Oketch (2013). Some modification of questionnaire was made to harmonize with the objectives of this study and the research model described earlier. The questionnaire was prepared in English and also pre-tested prior to the actual data collection in the target population. But there was no questionnaire that need modification after pre-test done.

The questionnaires were designed in five-point likert-scale in which respondents are asked to provide relevant data on a set of statements. The scale moves from a weaker endorsement of the item (i.e., strongly disagree) to a stronger endorsement of the item (i.e., strongly agree). I preferred to use the scale in this study because, it is easy to understand and it require less effort to answer for respondents and also ease to analysis and interpret the data.

4.8.3. Data Collection

For this quantitative study, questionnaire was self-administered to the respondents. This method has the advantage of obtaining data more efficiently in terms of finances and availability of respondents and also it reduces non-returnable of the distributed questionnaire. The data collection was conducted through self-administered structured questionnaires by two phase. In first phase, data was collected for the independent factor (strategy) and for intermediator factors (people, organization, technology, Culture, and environment) and in the second phase, data was collected for the dependent factor (readiness for Km adoption) after one and half month of the first phase of data collection.

The confidentiality of the data is explained to the participants. For the distribution and collection of the questionnaires, the researcher took the responsibility. To achieve the target of the study, continuous follow up and supervision was made by the researcher throughout the data distribution and collection process.

Section three of the questionnaire was contained, 60 questions in the first phase and 6 questions in the second phase. Totally, it contained 66 questions which was designed to ascertain the relevant data about readiness for adopting KM. A total of 127 research questionnaires were distributed and 124 (97.6%) questionnaires were returned.

4.9. Quality of Measures

The questionnaires are supposed to offer accurate and repeatable measures of the research hypotheses, validity and reliability tests are used to establish the quality of any empirical research,(Yin, R. K., (2009).

4.9.1. Reliability

Reliability means the scores of an instrument are stable and consistent (Creswell, 2005). It states the extent to which the probablity sample represents all employees in the organisation and the m agnitude to which the questionnaire yielded consistent data from all employees who responded. Regardi ng to the sample, given the total number of employees in the organisation, statistically calculatig the req uired sample size to be 95% certain that the sample will represent the population within specified confid ence limits (Saunders et al., 2012).

In light of Tavakol and Dennick (2015), in Likert-type scales, it is imperative to calculate Cronbach's alpha coefficient for internal consistency reliability for any scales or subscales. According to them the acceptable values of alpha ranging from 0.70 to 0.95. The low value of alpha (<0.70) indicate poor inter-relatedness between items and also a high value of alpha (> 0.95) may suggest redundancies in the scale items. In addition, most research recommended using value of alpha >=0.7, (Haile et al., 2014; wong et al., 2013). Therefore, for this research, Cronbach's alpha, Cutoff value of 0.7 is used to test the reliability of measurement models by using PLS path modeling analysis.

4.9.2. Validity

Validity means the individual scores of an instrument are meaningful and allow the researcher to draw good conclusions from the sample population being studied (Crewell, 2005). It is concerned about the appropriateness of measures used, the accuracy of the analysis of the results, and the generalizability of the findings (Saunders et al., 2007). Validity is the magnitude to which an instrument measures what it is intended to measure. It requires that an instrument is reliable, but an instrument can be reliable without being valid. Validity is the extent to which the interpretations of the results of a test are warranted, which depend on the test's intended use (i.e., measurement of the underlying construct), (Saunders et al., 2012).

On this research, validity was tested through, i.e. convergent validity and discriminatory validity. Convergent validity is tested using Average Variance Extracted (AVE) and minimum cutoff value 0.5 used. Whereas discriminator validity was tested using Fornell-Larcker Criterion and Cross loading.

4.10. Data Analysis

Data analysis is a process of inspecting, cleansing, organizing, transforming, and modeling data (ways of working with information or data) with the goal of discovering valuable information, suggesting conclusions, and supporting decision-making. It is highly dependent on both the availability of data, the quality of the available data and the technique used, (Saunders et al., 2012).

I used SMARTPLS 3.0 for this research due to its graphical user interface for variance-based structural equation modeling (SEM) using the partial least squares (PLS) method as well as the software can be used in empirical research to analyses the collected data (e.g. from surveys) and test hypothesized relationships, (Marko et al 2014; Michael J et al, 2015). As a result, in this research, the data was cleaned from missed item and outliers feed in to SMARTPLS version 3.0 for further analysis. The data was analyzed using regression and inferential statistics. For the first section of the questionnaire descriptive statistics such as frequency and percentage used. For the second section of the questionnaire inferential statistics was used including testing the hypothesis.

After the data analysed using SMARTPLS 3.0, in order to provide better insights on readiness, this study used the assessment model from Aydin and Tasci's study (2005). According to Sutrisno et al, (2010), on this model, the alternatives can easily be coded as 1, 2, 3, 4, and 5, as in a five-point Likert-

type scale. Hence, the 3.4 mean score can be identified as the expected level of readiness with the item, while other responses enable organizations to show higher or lower levels of readiness. This assessment model used for compare and contrast the result of the analysed data of the study in SMARTPLS by using average mean value of data. I preferred to use this assessment model because, it is clear and easily understandable.

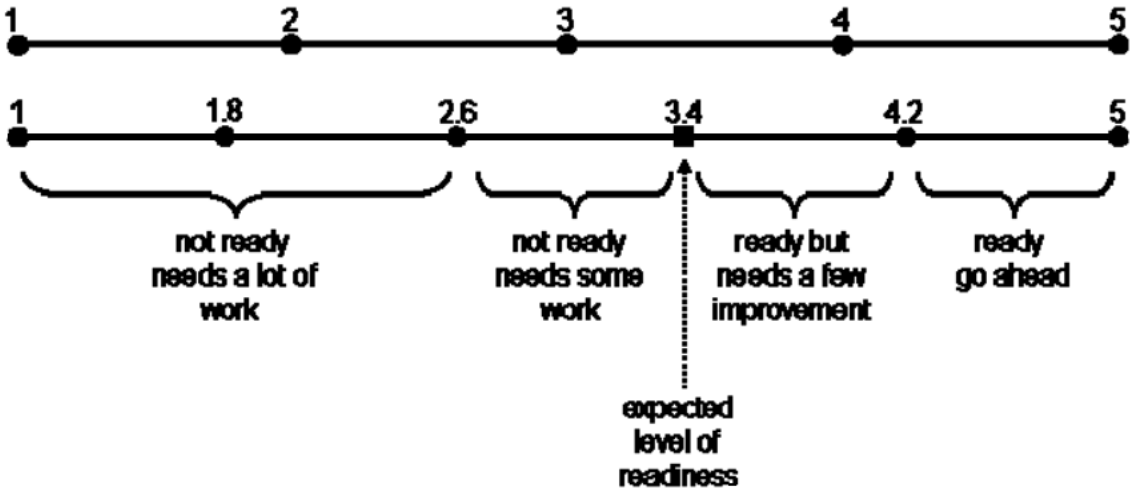


Fig.4.1 Readiness assessment model (source: Aydin & Tascam, 2005)

4.11. All Research Hypotheses in a Compile Form

Hypothesis1 (H1): Strategy has significant impacts on KM adoption.

Hypothesis2 (H2): Technology has significant impacts on KM adoption.

Hypothesis3 (H3): Organization has significant impacts on KM adoption.

Hypothesis4 (H4): People has significant impact on KM adoption.

Hypothesis5 (H5): Cultural has significant impact on KM adoption.

Hypothesis6 (H6): Environment has significant impact on KM adoption.

Hypothesis 7 (H7): Strategy has significant impacts on technology readiness in the organization.

Hypothesis 8 (H8): Strategy has significant impacts on organization readiness.

Hypothesis9 (H9): Strategy has significant impacts on people readiness in the organization.

Hypothesis10 (H10): Strategy has significant impacts on cultural readiness in the organization.

Hypothesis 11(H11): Strategy has significant impacts on environment readiness in the organization.

4.12. Ethical Consideration

This study is conducted after getting permission from the director of the agency and the manager of each branch offices. The information sheet and written consent forms delivered to respondents without their name along with each questionnaires to maintain confidentiality. And also anyone who was reluctant to participate in the study was excluded.

4.13. Summary

Chapter four described the research methodology applied in the study; it explained the underlying research philosophy and the justification for the choice of a mixed methodology approach. The chapter further highlighted the study design, the population, and sample, determination, sampling procedures and sample size, and data collection procedures, procedures for determining the reliability and validity of the data. Finally the chapter explained the data analysis techniques used in the study and ethical consideration.

CHAPTER FIVE

5.1. Data Analysis, Result and Findings

5.1.1. Introduction

This chapter covers, the description of data screening procedures, demographic data analysis of the respondent, both assessment of measurement model (reliability and validity test) and structural model (significance test, path analysis, R-squared and Q-squared) and presents the hypotheses tests.

5.1.2. Preliminary Evaluation

Preliminary evaluation was conducted to prepare the data for the assessment of measurement and structural models. Data screening processes were undertaken, including visual inspection of the data for identifying and correcting errors in the data set, identification of missing data and tests for violations of statistical assumptions such as normality and outliers (Hair et al., 2014).

5.1.3. Data Screening

Data cleansing or data cleaning is the process of detecting and correcting (or removing) corrupt or inaccurate records from a record set, table, or database and refers to identifying incomplete, incorrect, inaccurate or irrelevant parts of the data and then replacing, modifying, or deleting dirty data and make ready it before conducting further statistical analyses.

When checking for errors in the questionnaires filled by the respondents, values that are outside the range of possible values due to error in data entry were identified. The errors identified were missing data in two questionnaires and also two questionnaires were filled with less concerned respondent's i.e. the respondent filled the same value for all questions in the questionnaire. Because of these errors, a total of four questionnaires were discarded from further analysis. Therefore a total of 120 respondent questionnaires were used for further analysis.

5.1.4. Demographic Data of the Respondent

Table 5.1 shows that the gender of the majority respondent is male, comprises 80.8% (97) with the remaining 19.2 % (23) being female. The highest percentage of 64.2% (77) of the respondent is age group 18-30. Respondent with age group 31-40 account 30 % (36) and finally age group >40 are the least which comprise only 5.8% (7) of the total respondent.

Regarding to educational background most of the respondents, i.e. 87.5 % (105) is first degree holder and 12.5% (15) have master's degree. The respondents who have work experience <3 are 25% (30), 3-5 are 35.8% (43), 6-10 are 30.8 % (37) and the most experienced respondent of the study (> 10 years of experience) accounts 8.4 % (10) of the respondents.

Demographic Object		Frequency	Percent
Gender	Female	23	19.2
	Male	97	80.8
	Total	120	100.0
Age	18-30	77	64.2
	31-40	36	30.0
	>40	7	5.8
	Total	120	100.0
Education	Degree	104	86.7
	Mater's	16	13.3
	Total	120	100.0
Work Experience	<3	30	25.0
	3-5	43	35.8
	6-10	37	30.8
	>10	10	8.4
	Total	120	100.0

Table 5.1. Demographic Data for the respondent

5.2. Evaluation of Measurement Model

The research model of this study consists of seven latent variables and sixty six Indicators or items. Following the guidelines by Amare A. (2014), the measurement model used in this study is categorized as reflective. Table 1 shows the latent and corresponding variables.

Constructs/Factors	# of Variables	Variable names and range
Strategy (STRXX)	11	STR01-STR11
Technology (TECXX)	9	TEC12-TCH20
Organization (ORGXX)	9	ORG21-ORG29
People (PEOXX)	11	PEO30-PEO40
Culture(CULXX)	9	CUL41-CUL49
Environment (ENVXX)	11	ENV50-ENV60
KM adoption (RDNXX)	6	RDN61-RDN66
Total	66	

Table 5.2. Latent and Corresponding items

To assess measurement model, reliability and validity test were conducted. The reliability and validity tests were implemented by using responses to this research questions. For reliability test, the researcher used composite reliability value of the SMARTPLS. This value is used to check the internal consistency reliability of the instrument. For validity test, convergent validity and discriminatory validity were employed.

5.2.1. Reliability

Reliability is the degree to which data collection method or methods will yield consistent, stable, predictable and repeatable findings, similar observations would be made or conclusions reached by other researchers. I.e. the result of a researcher is considered reliable if consistent results have been obtained in identical situations but different circumstances (Saunders et al., 2012).

The data collection instrument for this study was tested for reliability using computation of Cronbach's Alpha coefficient for all variables in the model. The coefficient ranges approaches to 0 meaning no

consistency and approaches to 1 meaning complete consistency. That means, the higher the coefficient the more reliable is the scale. For this study a cutoff point of 0.7 and above was considered as acceptable. Because some authors consider items whose Alpha coefficient is 0.7 and above as reliable; (Hair et al., 2014, Nils, U. and Frederik, A., 2010). As a result, Items that meet these criteria were used in this research and those which doesn't meet the criteria were excluded from further analysis as indicated in table 5.2. The table shows those of items deleted and retained items based on the above criteria for further analysis.

Based on outer loading value those who have less than 0.7 were deleted. As indicated in Table 5.3 , 6 items from Strategy (STR) construct, 5 items from technology(TEC) construct, 6 items from culture (CUL) construct, 5 items from people (PEO) construct, 6 items from Organization (ORG) construct, 8 items from Environment factors (ENV) construct, 3 items from knowledge management adoption (RDN) construct are removed from further analysis.

Construct	Outer Indicator	Loading	Status	construct	Outer Indicator	Loading	Status
Items for strategy	STR1	0.655	Deleted	Items For People	PEO30	0.608	Deleted
	STR2	0.560	Deleted		PEO31	0.729	Retained
	STR3	0.690	Deleted		PEO32	0.826	Retained
	STR4	0.749	Retained		PEO33	0.716	Retained
	STR5	0.736	Retained		PEO34	0.735	Retained
	STR6	0.756	Retained		PEO35	0.710	Retained
	STR7	0.667	Deleted		PEO36	0.799	Retained
	STR8	0.675	Deleted		PEO37	0.685	Deleted
	STR9	0.705	Retained		PEO38	0.582	Deleted
	STR10	0.723	Retained		PEO39	0.517	Deleted
	STR11	0.639	Deleted		PEO40	0.590	Deleted
	TEC12	0.727	Retained		ORG21	0.627	Deleted
	TEC13	0.794	Retained	Items For Organization	ORG22	0.585	Deleted
	TEC14	0.807	Retained		ORG23	0.686	Deleted
	TEC15	0.681	Deleted		ORG24	0.680	Deleted

Items For Technology	TEC16	0.677	Deleted		ORG25	0.688	Deleted
	TEC17	0.623	Deleted		ORG26	0.714	Retained
	TEC18	0.491	Deleted		ORG27	0.663	Deleted
	TEC19	0.563	Deleted		ORG28	0.742	Retained
	TEC20	0.736	Retained		ORG29	0.764	Retained
Items For Culture	CUL41	0.668	Deleted	Items For Environment	ENV50	0.548	Deleted
	CUL42	0.799	Retained		ENV51	0.701	Retained
	CUL43	0.759	Retained		ENV52	0.775	Retained
	CUL44	0.364	Deleted		ENV53	0.447	Deleted
	CUL45	0.701	Retained		ENV54	0.650	Deleted
	CUL46	0.471	Deleted		ENV55	0.630	Deleted
	CUL47	0.336	Deleted		ENV56	0.736	Retained
	CUL48	0.645	Deleted		ENV57	0.630	Deleted
	CUL49	0.392	Deleted		ENV58	0.284	Deleted
Items for KM adoption	RDN61	0.799	Retained		ENV59	0.528	Deleted
	RDN62	0.534	Deleted		ENV60	0.522	Deleted
	RDN63	0.810	Retained				
	RDN64	0.695	Deleted				
	RDN65	0.594	Deleted				
	RDN66	0.813	Retained				

Table 5.3. First Iteration outer loading value

After removing the indicator having value of outer loading below the threshold value (< 0.7) in the above table 5.3 item, the outer loading of the indicators was recalculated using SMARTPLS.

Construct	Outer Indicator	Loading	Status	construct	Outer Indicator	Loading	Status
Items for strategy	STR4	0.765	Retained	Items For People	PEO31	0.738	Retained
	STR5	0.748	Retained		PEO32	0.873	Retained
	STR6	0.772	Retained		PEO33	0.735	Retained
	STR9	0.772	Retained		PEO34	0.784	Retained
	STR10	0.795	Retained		PEO35	0.733	Retained
					PEO36	0.810	Retained
Items For Technology	TEC12	0.841	Retained	Items For Organization	ORG26	0.717	Retained
	TEC13	0.877	Retained		ORG28	0.852	Retained
	TEC14	0.824	Retained		ORG29	0.848	Retained
	TEC20	0.798	Retained	Items For Environment	ENV51	0.787	Retained
Items For Culture	CUL42	0.894	Retained		ENV52	0.891	Retained
	CUL43	0.850	Retained		ENV56	0.770	Retained
	CUL45	0.641	Deleted				
Items for KM adoption	RDN61	0.902	Retained				
	RDN63	0.796	Retained				
	RDN66	0.869	Retained				

Table 5.4. Second Iteration outer loading value

Here also after removing the indicator having value of outer loading in the second iteration below the threshold value (< 0.7) in the above table 5.4 item, the outer loading of the indicators was recalculated again for the third time using SMARTPLS. After the third iteration, items those who have less than 0.7 were deleted. Based on the above outer loading value, 1 item from culture (CUL) construct was removed for further analysis.

Composite reliability is used to evaluate the construct measures' of internal consistency reliability. It provides a more appropriate measure of internal consistency reliability because, it does not assume that all indicator loadings are equal in the population and also not sensitive to the number of items in the scale and generally avoid underestimate internal consistency reliability as opposed to Cronbach's α (Hair et al., 2014). Table 5.5 indicates the number of item remained in each construct after deleted low Alpha value and the composite reliability of each construct.

Construct	Number of Items Before Reliability Test	Number of Items After Reliability Test (α >0.7)	Composite Reliability
Strategy	11	5	0.879
Technology	9	4	0.902
Organization	9	3	0.849
People	11	6	0.903
Culture	9	2	0.897
Environment	11	3	0.858
KM adoption	6	3	0.892
Total	66	26	-

Table 5.5. Reliability Test

After removing indicators that failed to meet the minimum prescribed threshold (as shown in table 5.3 and table 5.4), the data was re-analyzed. The revised model is shown below as fig 5.1 and table 5.6, variables of the strategy construct outer loading ranged from 0.747-0.796, variables of the technology construct ranged from 0.798-0.877, variables of the organization construct ranged from 0.717-0.852, variables of people construct ranged from 0.733 -0.873, variables of the culture construct was 0.911 and

0.894, variables of the environment construct ranged from 0.770-0.891, and variables of the organizational construct on knowledge management implementation construct ranged from 0.798-0.902.

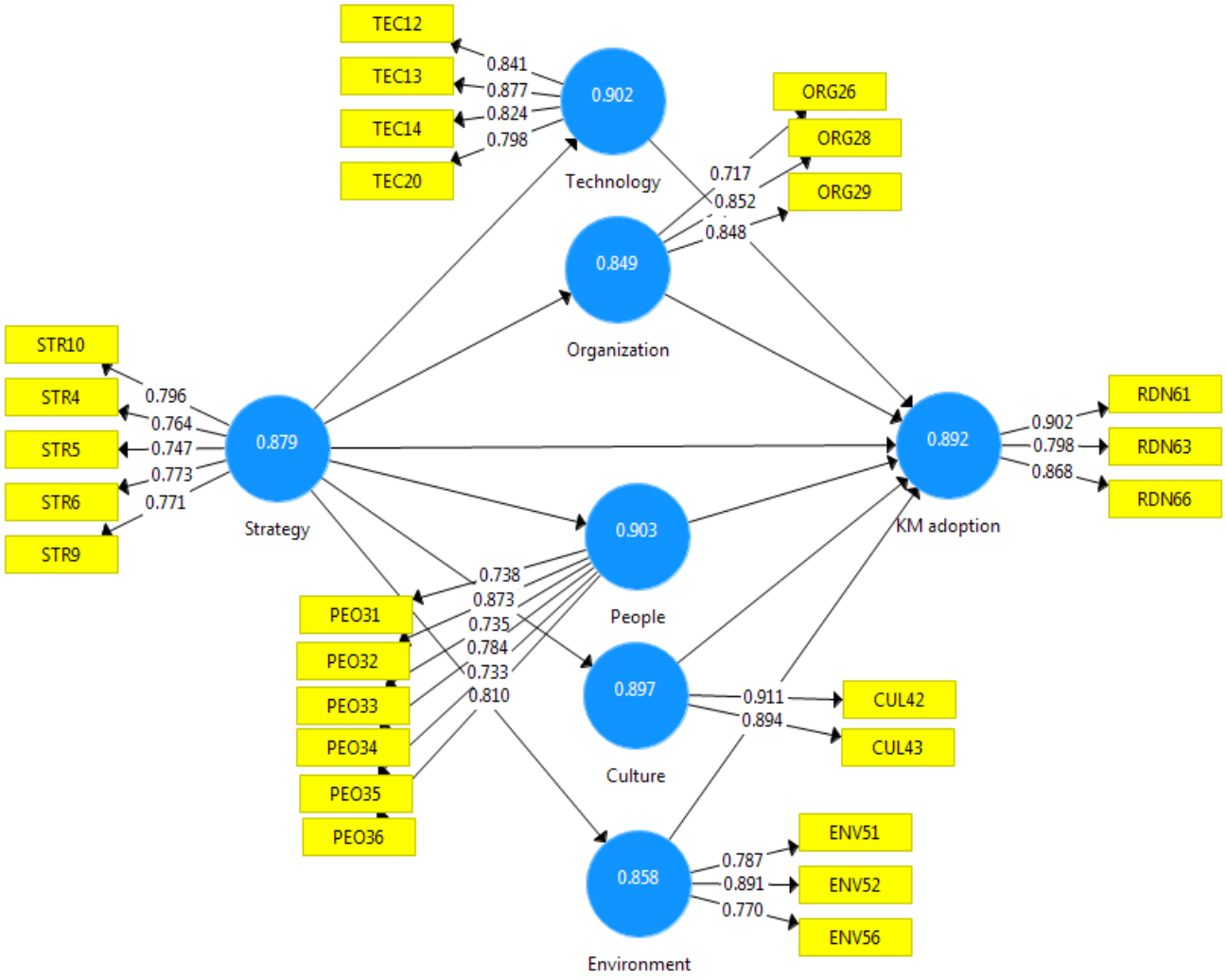
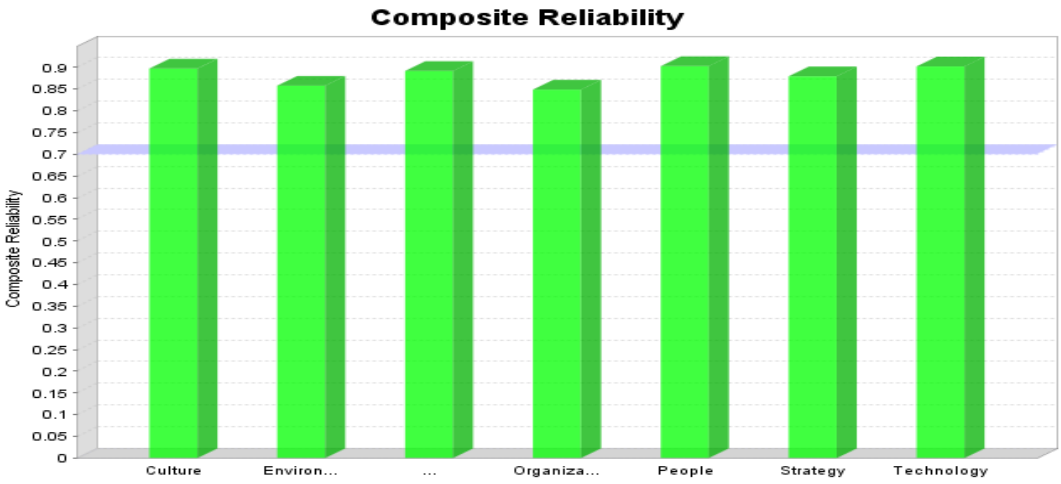


Fig 5.1. Structural Model with refined Measurements

Construct	variables	Outer Loading	Construct	variables	Outer Loading
Culture	CUL42	0.911	KM adoption	RDN61	0.902
	UL43	0.894		RDN63	0.798
Environment	ENV51	0.787			
	ENV52	0.891		RDN66	0.868
	ENV56	0.770			
Organization	ORG26	0.717	Strategy	STR4	0.764
	ORG28	0.852		STR5	0.747
	ORG29	0.848		STR6	0.773
People	PEO31	0.729		STR9	0.771
	PEO32	0.862		STR10	0.796
	PEO33	0.751	Technology	TEC12	0.841
	PEO34	0.796		TEC13	0.877
				TEC14	0.824
	PEO35	0.739		TEC20	0.798
	PEO36	0.800			

Table 5.6. Third Iteration Outer Loading value (after deleting low loading Items from the second iteration result)

The composite reliability of the construct as Table 5.5, fig 5.1 and Graph 5.1 that shows constructs of knowledge management adoption: strategy (0.879), technology (0.902), organization (0.849), culture (0.897), environment (0.858), knowledge management adoption (0.892) and people (0.903) has relatively high composite reliability, which showed the high internal consistency reliability of the instrument.



Graph 5.1 Composite Reliability

5.2.2. Validity

Validity is the extent to which a concept, conclusion or measurement is well-founded and corresponds accurately to the real world. The validity of a measurement tool is considered to be the degree to which the tool measures what it claims to measure; in this case, the validity is an equivalent to accuracy (Brains et al., 2011).

Construct validity evidence involves the empirical and theoretical support for the interpretation of the construct, (Carole L. et al., 2008). In this study, Construct validity was established since the questionnaire was developed based on tools used in prior studies with slight modifications to address the objective of this study. Content validity usually depends on the judgment of experts in the field, (Carole L. et al., 2008). In this research to insure content validity; besides to recurrent discussion with advisor and researcher friends', convergent and discriminate validity were implemented. Validity is examined by noting a construct's convergent validity and discriminant validity, (Hair et al., 2014).

5.2.2.1. Convergent validity

Convergent validity refers to the degree to which two measures of constructs that theoretically should be related, are in fact related. To establish convergent validity the researcher considers the outer loadings and the Average Variance Extracted (AVE). Support is provided for convergent

validity when each item has outer loadings value above 0.70 and when each construct's average variance extracted (AVE) is 0.50 or higher, (Hair et al., 2014). According to Hair et al, the AVE is defined as the grand mean value of the squared loadings of a set of indicators (i.e. the sum of the squared loading divided by the number of indicators) and is equivalent to the communality of a construct.

According to Trochim, W. M. K. (2006), measures of constructs that theoretically should be related to each other are, in fact, observed to be related to each other (that is, we should be able to show a correspondence or convergence between similar constructs)

Table 5.7 show that AVE value of this research. The AVE value of each construct that means strategy, technology, organization, people, culture, environment, and KM adoption are above the threshold value of 0.50. Thus the measures of all construct have high level of convergent validity.

Construct	Average Variance Extracted (AVE)
Culture	0.814
Environment	0.669
Organization	0.653
People	0.609
KM adoption	0.734
Strategy	0. 734
Technology	0. 698

Table 5.7. Average Variance Extracted (AVE) Value

5.2.2.2. Discriminatory Validity

Discriminant validity represents the extent to which the construct is empirically distinct from other constructs, Joe F. Hair J, 2014. According to Joe F. Hair J, there are two methods for assessing the existence of discriminant validity. The first method is Fornell and Larcker criterion, which states the "square root" of AVE of each latent variable, should be greater than the correlations among the latent variable. The second option for assessing discriminant validity is examining the cross loadings of the

indicators. This method, requires that the loadings of each indicator on its construct are higher than the cross loadings on other constructs.

According to Trochim, W. M. K. (2006), measures of constructs that theoretically should not be related to each other are, in fact, observed to not be related to each other (that is, we should be able to discriminate between dissimilar constructs). Discriminant validity was examined using the correlation matrix of the constructs as presented in Table 5.8.

A) Fornell-Larcker Criterion

According to Fornell-Larcker Criterion, the "square root" of the AVE of each construct should be higher than the construct's highest correlation with any other constructs in the model. Table 5.8 shows that the result of Fornell-Larcker Criterion. The values of each constructs such as Strategy (0.877), Technology (0.914), Organization (0.909), People (0.883), Culture (0.950), Environment (0.904) and Knowledge Management adoption (0.926) are all higher than the correlation of these constructs with other latent constructs from any value from the column in the path model.

	Environment	KM adoption	Strategy	Culture	Organization	People	Technology
Environment	AVE=0.818 $\sqrt{AVE}$=0.**904**						
KM adoption	0.507	AVE=0.857 $\sqrt{AVE}$=0.**926**					
Strategy	0.493	0.732	AVE=0.770 $\sqrt{AVE}$=0.**877**				
Culture	0.468	0.923	0.713	AVE=0.902 $\sqrt{AVE}$=0.**950**			
Organization	0.461	0.622	0.680	0.600	AVE=0.808 $\sqrt{AVE}$=0.**909**		
People	0.569	0.894	0.772	0.904	0.652	AVE=0.780 $\sqrt{AVE}$=0.**883**	
Technology	0.376	0.707	0.692	0.647	0.605	0.709	AVE=0.835 $\sqrt{AVE}$=0.**914**

Note: Diagonal terms (**in bold**) are square root of the average variance extracted. Off-diagonal terms are the correlation of latent constructs.

Table 5.8. Fornell-Larcker Criterion

B) Cross loading

Discriminatory validity is established when an indicator's loading on a construct is higher than all of its cross loadings with other constructs. Please refer the detailed result in Table 5.9. The table shows that individual loading value (value in bold) and all values are higher than all of its cross loading with other constructs. Thus, discriminatory validity established for all constructs.

	Culture	Environment	Organization	People	KM adoption	Strategy	Technology
CUL42	**0.911**	0.444	0.523	0.616	0.776	0.456	0.665
CUL43	**0.894**	0.399	0.551	0.673	0.788	0.630	0.495
ENV51	0.601	**0.787**	0.391	0.471	0.394	0.357	0.375
ENV52	0.392	**0.891**	0.356	0.486	0.457	0.459	0.309
ENV56	0.359	**0.770**	0.391	0.442	0.388	0.386	0.342
ORG26	0.475	0.370	**0.717**	0.488	0.415	0.451	0.472
ORG28	0.502	0.413	**0.852**	0.558	0.539	0.569	0.465
ORG29	0.483	0.339	**0.848**	0.535	0.512	0.616	0.531
PEO31	0.647	0.474	0.471	**0.738**	0.640	0.544	0.526
PEO32	0.892	0.437	0.528	**0.873**	0.906	0.680	0.565
PEO33	0.528	0.466	0.558	**0.735**	0.557	0.581	0.510
PEO34	0.587	0.430	0.506	**0.784**	0.639	0.645	0.635
PEO35	0.599	0.439	0.441	**0.733**	0.545	0.517	0.461
PEO36	0.891	0.444	0.553	**0.710**	0.816	0.628	0.505
RDN61	0.876	0.440	0.535	0.650	**0.902**	0.666	0.650
RDN63	0.781	0.431	0.554	0.704	**0.798**	0.612	0.527
RDN66	0.702	0.430	0.510	0.523	**0.868**	0.597	0.638
STR10	0.569	0.291	0.548	0.598	0.489	**0.796**	0.593
STR4	0.656	0.322	0.465	0.542	0.548	**0.764**	0.508
STR5	0.447	0.431	0.521	0.500	0.412	**0.747**	0.428
STR6	0.594	0.500	0.546	0.660	0.653	**0.773**	0.512
STR9	0.562	0.351	0.534	0.649	0.586	**0.771**	0.609
TEC12	0.687	0.288	0.463	0.622	0.635	0.554	**0.841**
TEC13	0.538	0.325	0.489	0.574	0.593	0.645	**0.877**
TEC14	0.500	0.256	0.531	0.569	0.561	0.578	**0.824**
TEC20	0.435	0.392	0.543	0.609	0.572	0.532	**0.798**

Table 5.9. Cross loading

5.3. Evaluation of Structural Model

A structural model defines the causal relationships between the latent constructs, thus the assessment of the structural model is based on the meaningfulness and prediction of the proposed relationship.

5.3.1. Checking Structural Path Significance in Bootstrapping

Bootstrapping conducted to generate T-statistics for significance testing of the inner and outer model. In this procedure, a large number of subsamples (5000) are taken from the original sample with replacement to give bootstrap standard errors, which in turn gives approximate T-values for significance testing of the structural path.

In light of Wong (2013) using a two-tailed t-test with a significance level of 5%, the path coefficient will be significant if the T-statistics is larger than 1.96 or P<0.05. The result of bootstrapping of this study as indicated in table 5.10, three linkages of constructs in the inner model are not statistically significant but the others eight linkages of constructs are statistically significant.

Links of constructs that are not statistically significant, strategy → KM adoption (T-Value=0.346 or P-Value=0.729), organization → KM adoption (T-Value=0.268 or P-Value=0.788) and environment → KM adoption (T-Value=1.015 or P-Value=0.310).

Links of constructs statistically significant are: technology → KM adoption (T-Value=2.572 or P-Value=0.010), people → KM adoption (T-Value=2.110 or P-Value=0.035), culture → KM adoption (T-Value=6.557 or P-Value=0.000), and strategy → technology (T-Value=10.387 or P-Value=0.000), ,strategy → organization (T-Value=13.006 or P-Value=0.000), strategy → people (T-Value=21.665 or P-Value=0.000), strategy → culture (T-Value=14.783 or P-Value=0.000), strategy → environment (T-Value=6.138 or P-Value=0.000).

On the other hand T-statistics result of the entire outer model are larger than 1.96, as a result the outer model loadings are highly significance. Please refer the detailed result in Appendix Table 5.15.

hypothesis		T Statistics	P Values
H1	strategy → KM adoption	0.346	0.729
H2	technology → KM adoption	2.572	0.010
H3	organization → KM adoption	0.268	0.788
H4	people → KM adoption	2.110	0.035
H5	culture → KM adoption	6.557	0.000
H6	environment → KM adoption	1.015	0.310
H7	strategy → technology	10.387	0.000
H8	strategy → organization	13.006	0.000
H9	strategy → people	21.665	0.000
H10	strategy → culture	14.783	0.000
H11	strategy → environment	6.138	0.000

Table 5.10. T-statistics

5.3.2. Path Analysis (Path coefficient)

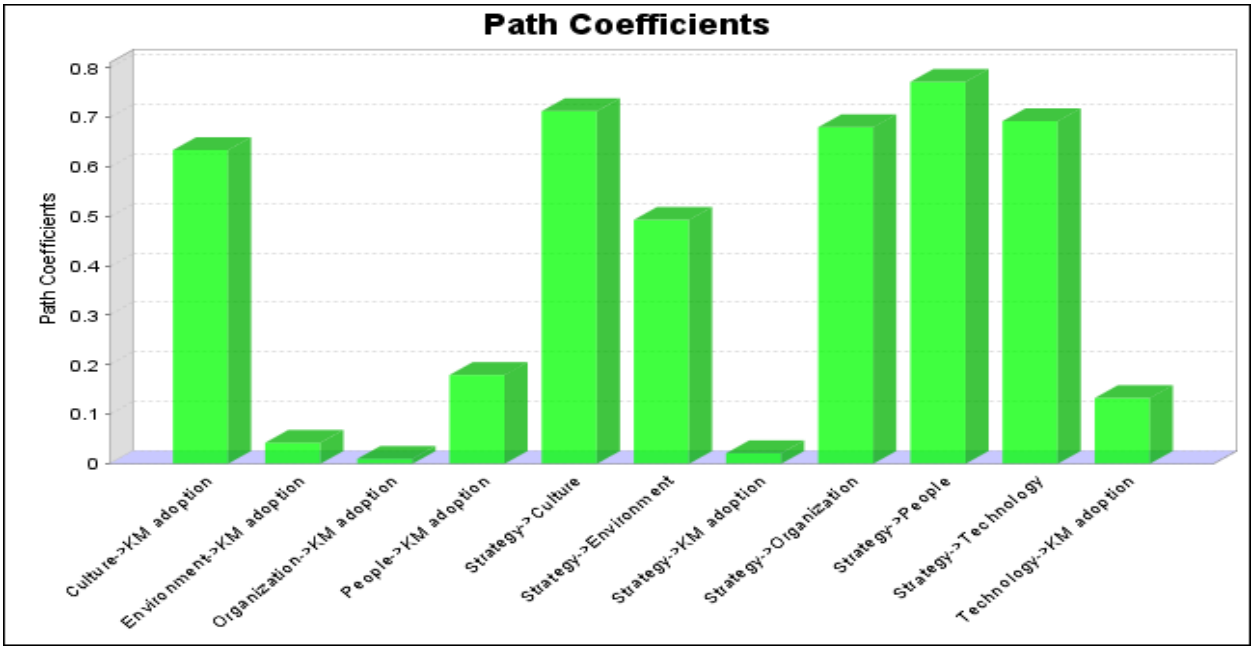
Path coefficient is a standardized regression coefficient (beta), showing the effect of an independent and intermediate variables on the dependent variable in the path model. The weight of different path coefficient enables us to rank their relative statistical importance, (Wong, 2013, Hair et al., 2014).

In this study, the path coefficient explains the relative importance of exogenous and intermediate constructs (strategy, technology, organization, people, culture, and environment) on dependent construct (KM adoption). The path cofficient value ranges between -1 to +1. When the Estimated path cofficient value is closer to 0 implies that weak relationship between the constructs . when the value closer to -1 representes strong inverse relationship between exgnouse and endogenouse constructs and it is statistically important. On the other hand, when the value closer to +1 represenets strong relations ships between exogenous, intermediate and dependent constructs and that is also statistically important.

As indicated in Table 5.11, Fig 5.2 and Graph 5.2, the links toward KM adoption and links of strategy to other constructs showed positive values of path coefficient. Out of the constructs, strategy (0.772) has the strongest link to people.

	Environment	KM adoption	Strategy	Culture	Organization	People	Technology
KM adoption							
Environment		0.043					
Culture		0.634					
Organization		0.010					
People		0.179					
Technology		0.133					
Strategy	0.493	0.021		0.713	0.680	0.772	0.692

Table 5.11. Path coefficient



Graph 5.2. Path coefficient

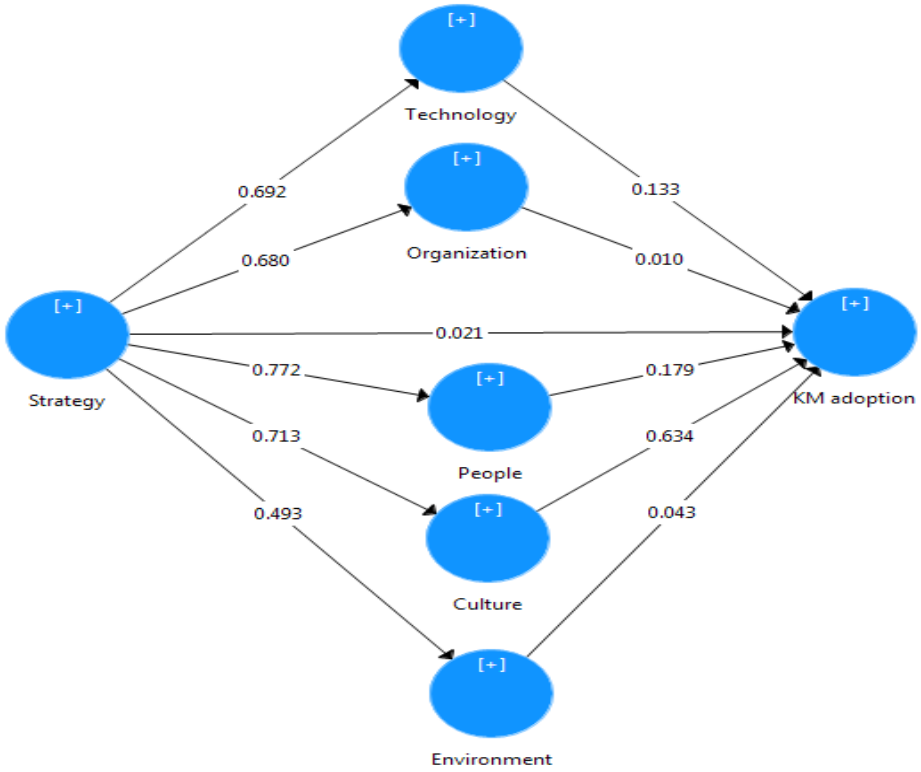


Fig 5.2. Refined Path Model

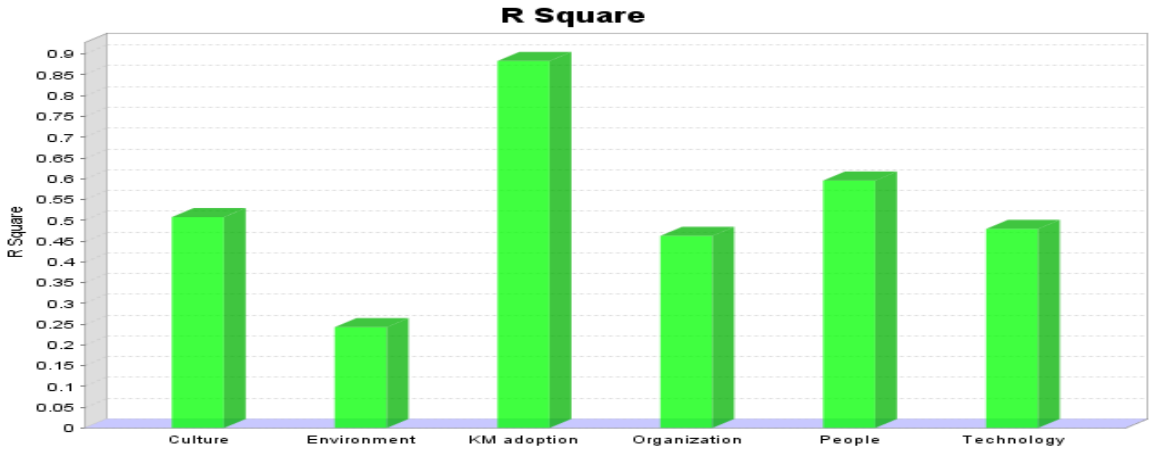
5.3.3. R- Squared Value

To evaluate the structural models, Coefficient of determination (R-Square(R^2)) was calculated. It is an index to measure each endogenous latent variable's R-Square. The value of R^2 is between 0 and 1 .If the value is closer to 1, the exogenous variables explain the intermediate and also the exogenous and intermediate variables explain the dependent variable well and if it is closer to Zero, it is week to explain. For this study R^2 value greater than 0.67 was used. Because the explanatory power of R-square is considered significant if R2 value is greater than 0.67, (Ke-Hwa L., & Chen, (2013).

R-Squared value of the predicted construct on Knowledge Management adoption is 0.883 as indicated in the table 12, graph 5.3. This result showed that the total constructs contribute 88.3% for the outcome of Knowledge Management adoption.

	R Square
Culture	0.508
Environment	0.243
Organization	0.463
People	0.595
KM adoption	0.883
Technology	0.479

Table 5.12. R Square



Graph 5.3. R Square

5.3.4. Assessment of predictive Relevance (Q^2)

Predictive relevance (Q^2) as the measurement to examine predictive relevance of inner model that can be evaluated by a nonparametric Stone-Geisser test, (Hair et al. 2014; Ke-Hwa L., & Chen, (2013). This index can apply the blindfolding procedure in SmartPLS to examine the extent to which this prediction is successful or not. In the structural model, Q^2 value larger than zero for a certain reflective endogenous latent variable indicate the path model's predictive relevance for this particular construct.

The result from the blindfolding of this study as indicated in the table 5.13, provides Q^2 value of 0.368 for strategy, 0.385 for technology, 0.310 for organization, 0.443 for people, 0.368 for culture, 0.343 for environment, 0.434 on Km implementation. All of these values are above zero confirming that the structural model indicate predictive relevance for the Km implementation.

Constructs	**Q^2 (=1-SSE/SSO)**
Culture	0.368
Environment	0.343
Organization	0.310
People	0.443
KM adoption	0.434
Technology	0.385

Table 5.13. Predictive relevance (Q2)

5.4. Hypotheses Testing

Using a bootstrapping technique with a re-sampling of 5000, the path estimates and t-statistics were calculated for the hypothesized relationships. Please for detailed refer bootstrapping result in appendix section table.

The researcher derived eleven hypotheses for this research based on literature review. All eleven hypotheses are supported by the literature. Now it is time to check these hypotheses based on the data collected from LHRIA respondent. T-Value or P-Value is used to test the hypothesis. Parameters whose t-values were greater than 1.96 were considered statistically significant at the 0.05 level.

The coefficient of the relationship of observable variables of strategy, technology, organization, people, culture, and environment to dependent variable of readiness for KM adoption, along with its significance levels, is reported in Table 5.14. The accepted significance level is t> 1.96 or p < 0.05. The results presented show that among the proposed relationships, 72.7 % (8) of the hypotheses are found significant.

Hypothesis		Path coefficient (Beta)	T Statistics	P Values	Accepted/ Rejected
H1	Strategy → KM adoption	0.021	0.346	0.729	Rejected
H2	Technology → KM adoption	0.133	2.572	0.010	Accepted
H3	Organization → KM adoption	0.010	0.268	0.788	Rejected
H4	People → KM adoption	0.179	2.110	0.035	Accepted
H5	Culture → KM adoption	0.634	6.557	0.000	Accepted
H6	Environment → KM adoption	0.043	1.015	0.310	Rejected
H7	Strategy → Technology	0.692	10.387	0.000	Accepted

H8	Strategy → Organization	0.680	13.006	0.000	Accepted
H9	Strategy → People	0.772	21.665	0.000	Accepted
H10	Strategy → Culture	0.713	14.783	0.000	Accepted
H11	Strategy → Environment	0.493	6.138	0.000	Accepted

Table 5.14. Hypothesis Result

5.5. Summary

The data of this study was successfully tested and is considered reliable and valid based on the results of the reliability test and validity test using SMARTPLS trial version 3.0. The hypotheses of this research were tested. The results show that among the proposed hypotheses, 27.3 %(3) hypotheses are rejected and the others are supported/accepted. The results of this study and the hypotheses will be discussed in detail in the next chapter.

CHAPTER SIX

6.1. DISCUSSION

6.1.1. Introduction

Results of the data analyses presented in chapter Five are discussed in this chapter to address the research questions outlined in Chapter 1. A review of the hypotheses is provided at the beginning of each section. This chapter analyses the findings of this study in light of existing literature and reports on the consistency or else of the research findings with previous studies. Lastly a summary is presented to conclude this chapter.

6.1.2. Hypothesis Result Discussion

As indicated in chapter five in the hypothesis testing result, three hypothesizes, such as H1 (the effect of strategy (path coefficient= 0.021, T-value=0.346, p-value=0. 729) on Readiness for KM adoption), H3 (the effect of organization (path coefficient= 0.01, T-value=0.268, p-value=0.788) on Readiness for KM adoption) and H6 (the effect of Environment (path coefficient= 0.043, T-value=1.015, p-value=0.310) on KM adoption were rejected.

Based on the above result, Organization and Environment constructs are not significant for Readiness to adopt Knowledge Management. Due to this hypothesis H8 (the effect of Strategy on organization) and H11 (the effect of Strategy on Environment) are not also significant for this study. Even though strategy construct is not directly significant for Readiness to adopt Knowledge Management , it is significant indirectly as shown in the hypothesis H7 (Strategy (path coefficient= 0. 692, T-value=0.268, p-value=0.000) → Technology), H9 (Strategy (path coefficient= 0. 772, T-value=10. 387, p-value=0.000) → People) and H10 (Strategy (path coefficient= 0.713, T-value=14.783, p-value=0.000) → Culture).

6.1.2.1. The Impact of Technology on Readiness for KM adoption

One of the objectives of this thesis is to understand the impact of Technology on Readiness for Knowledge Management adoption in case of LHRIA which leads to the hypothesis that Technology has a positive impact on Knowledge Management adoption. Therefore, the second proposed hypothesis was:

H2. Technology has significant impacts on KM adoption.

This hypothesis states that there is a positive impact of technology on readiness for Knowledge Management adoption. This hypothesis was supported in this research and statistically significant. The path measuring from Technology to readiness for Knowledge Management adoption in the model was path coefficient= 0.133, T-value=2.572 and p-value=0.010 (Table 5.13). It can be safely concluded that the hypothesized positive impact of Technology was maintained by (0.133 (13.3%)). As a result, statistically significant relationship occurred between Technology and Knowledge Management adoption.

This finding was consistence with many literature and research works. Azab et al. (2009), indicated that technology has a positive and statistically significant impact on readiness for KM adoption. Sucahyo et al., (2016), stated that IT infrastructure has a positive impact on Knowledge Management practice and implementation. Similarly, research conducted by Joko et al, (2015) stated that IT infrastructure had positive effect on the educational (path coefficient= 0.350, $p<0.01$) on KM implementation.

6.1.2.2. The Impact of People on Readiness for Knowledge management Adoption

This section explains the results of hypothesis testing with respect to the impact of People on Readiness for Knowledge management Adoption. It was hypothesized as People has a positive impact on Readiness for Knowledge Management Adoption. The fourth hypothesis was:

H4. People has significant impact on Knowledge Management adoption.

This hypothesis states that there is a positive impact of People on readiness for Knowledge Management adoption. This hypothesis was supported in this research and statistically significant. The path measuring from Technology to readiness for Knowledge Management adoption in the model was path coefficient= 0.179, T-value=2.110and p-value=0.035 (Table 5.13). It is possible to concluded safely that the hypothesized positive impact of People was maintained by (0. 179 (17.9%)). As a result, the suggested statistically significant relationship that is supposed to be present between people and Knowledge Management adoption was supported in the result of this study.

This finding consistence with previous research work that shows people has positive and statistically significant impact on knowledge Management adoption. Research work conducted by Azab et al. (2009), the effect of people on e-government readiness has the highest weight, that ensuring people is the major factor in the success of any information system. Joko et al, (2015) stated the results indicated that individual/people (path coefficient= 0.041, $p < 0.05$) has a positive effect on educational organization's readiness for KM implementation.

6.1.2.3. The Impact of Culture on Readiness for KM adoption

This section explains the hypothesis testing results with respect to the impact of culture on Readiness for Knowledge Management adoption. It was hypothesized that culture has a positive impact on Readiness for Knowledge Management adoption. The fifth hypothesis (H) was:

H5. Cultural has significant impact on KM adoption.

H5 stated that there is a positive and significant relationship between culture and Readiness for Knowledge Management adoption. This assertion was supported by the result of this research that has the path measuring of path coefficient= 0.634, T-value=6.557 and p-value=0. 000 from Culture to readiness for Knowledge Management adoption in the model (Table 5.13). It is possible to concluded that the hypothesized positive impact of culture was maintained by (0.634(63.4%)). The suggested positive and statistical significant relationship between culture and Knowledge Management adoption was supported in the result of this study.

This finding consistence with previous research work that shows culture has positive and statistically significant impact on Readiness for knowledge Management adoption. Joko et al,, (2015) argued that organizational culture positively affects readiness to change with coefficient and t-count values of 0.2978 and 5.76 respectively. Sucahyo et al. (2016) explained that organizational culture has positive impact on Knowledge Management practice in an organization. They supported their study result with previous studies which concluded that organizational culture significantly influences perceived usefulness of KMS (Huang et al. 2011).

Similarly the research conducted by Farshad et al (2013) stated that organizational culture variable and all its dimensions have a positive and significant effect on knowledge management

performance and its establishment. These supports the result of this research that culture positively affects Knowledge Management adoption.

6.1.2.4. The Impact of strategy on Technology(H7), people(8) and Culture(10) Readiness for Knowledge Management adoption

This section explains the hypothesis testing results with respect to the impact of Strategy on Technology, people and Culture readiness for Readiness for Knowledge Management adoption. It was hypothesized that Strategy has a positive impact on Technology, people and Culture readiness on Knowledge Management adoption. The seventh and ninth hypothesis were:

H7: Strategy has significant impacts on technology readiness in the organization.

H9: Strategy has significant impacts on people readiness in the organization.

H10: Strategy has significant impacts on cultural readiness in the organization.

H7 and H9 stated that there is a positive and significant relationship between strategy and Technology readiness as well as strategy and people readiness for Readiness for Knowledge Management adoption respectively. This assertion was supported by the result of this research that has the path measuring of path coefficient= 0.692, T-value=10.387 and p-value=0. 000 from Strategy to Technology readiness and path coefficient= 0. 772, T-value=21.665 and p-value=0. 000 from Strategy to People readiness for Readiness for Knowledge Management adoption in the model (Table 5.14). So it is possible to concluded that the hypothesized positive impact of strategy on Technology and people was maintained by (0.692 (66.2%)) and (0. 772 (77.2%)) respectively. As a result, the suggested statistically significant relationship that is supposed to be present between Strategy and culture as well as Strategy and people for Knowledge Management adoption was supported in the result of this study.

H10 stated that there is a positive and significant relationship between Strategy and culture for Knowledge Management adoption. This assertion was supported by the result of this research that has the path measuring of path coefficient= 0.713, T-value=14.783 and p-value=0. 000 from Culture to Knowledge Management adoption in the model (Table 5.14). It is possible to concluded that the hypothesized positive impact of culture was maintained by (0.713 (71.3%)). The suggested positive and statistical significant relationship between Strategy and culture with Knowledge Management adoption was supported in the result of this study.

The finding of H7 and H9 was consistence with previous research work that shows Strategy has positive and statistically significant impact on Technology and people for Readiness for knowledge Management adoption. Azab et al. (2009) stated that IT strategy has positive impact on technology and people with varying strength of modest on technology and strongest impact on employees/people. As they stated that although e-Government strategy does not have a major direct effect on KM adoption, it has an indirect effect through the Technology and people dimension.

Finally the result of this research shows that the significant constructs (technology, people and culture) have direct and strategy has indirect impact on implementation of Knowledge Management. On the other hand, Organization and Environment constructs are rejected.

6.1.3. Assessment of Readiness level of LHRIA for KM Adoption

By using Aydin and Tasci's (2005) assessment model, this study has evaluated whether LHRIA is ready to implement knowledge management through four constructs (strategy, technology, people, and culture) that are accepted in the hypothesis of this study.

Mean scores for the factors can be used to identify the areas of improvement in the constructs for readiness to implement knowledge management. First of all, the mean score for strategy, in all items are lower than the mean score of expected readiness level (Melr =3.4), as indicated below in the table 6.1. The mean score of item STR1 (2.5) and STR3 (2. 342) are lower than mean score of 2.6, which indicate not ready, needs a lot work. This implies that, Substantial improvements are needed on the area of policies, mission and vision of LHRIA for adopting knowledge management.

The mean score of all the other items of strategy are between mean score 2.6 and Melr =3.4, which implies that not ready, needs some work. This shows that, the needs of some work on support from government that affect customer willingness, institutional policies to promote and manage use of knowledge, direction, commitment and plan of the agency for knowledge management implementation. As well as some levels of improvements are needed in the area of ICT awareness and ICT training of human resources before adoption of knowledge management can be feasible in LHRIA. Therefore, it may be logical for LHRIA to start with simple ICT awareness creation and technology-based trainings such as using computer-based information

management, and also to try to find someone who has the commitment, knowledge, skills, responsibility and authority to lead LHRIA toward adapting knowledge management from inside or outside resources.

Items	Strategy	Samples	Mean(M)	Standard deviation(SD)
STR4	Your agency has direction, commitment and plan for knowledge management implementation.	120	2.608	0.942
STR5	Your agency has institutional policies in place to promote and manage use of knowledge.	120	2.717	0.968
STR6	Your agency has a plan that is needed and accessible by human resources for ICT awareness and ICT training to prepare readiness to adopt knowledge management	120	2.925	1.05
STR9	Your agency has an appropriate plan for evaluation of knowledge management initiative.	120	3.175	0.928
STR10	Your agency's top management support for adopting knowledge management.	120	3.292	1.003
	No of items= 5 Average of mean STR=2.94			

Table 6.1. Statistics for the items related to strategy construct

Replies to the Technology construct items in this study suggest that the agency needs significant improvements before viable knowledge management can be implemented. As strategy construct, the mean score for organization construct, in all its items are lower than the mean score of expected readiness level (Melr =3.4), as indicated below in the table 6.2.

The mean score of all the items of technology construct are between mean score of 2.6 and Melr =3.4, which implies that not ready, needs some work. This shows that, the needs of numerous improvements on the area of uses of Internet for information exchange, hardware and software required for knowledge management and on the security options for knowledge management required.

Based on the overall results, it can be concluded that the technology construct requires numerous improvements in order to pave the way for Knowledge management adoption at LHRIA.

Items	Technology	Samples	Mean(M)	Standard deviation(SD)
TEC12	Your agency has an effective laws to protect consumer privacy	120	3.092	1.118
TEC13	Your agency uses Internet for information exchange with other land sectors.	120	3.108	0.981
TEC14	The hardware and software required for the proposed project are readily available.	120	2.867	0.865
TEC20	Your agency has security options that are strong enough to fulfill the current security demand.	120	3.183	1.072
	No of items= 4 Average of mean ORG= 3.06			

Table 6.2. Statistics for the items related to technology construct

The mean score for people construct, all its items are lower than the mean score of expected readiness level (Melr =3.4), as indicated below in the table 6.3, the mean score of all the other items of organization construct are between mean score 2.6 and Melr =3.4, which implies that not ready, needs some work. This indicate that, the needs of numerous improvement on the senior managers awareness about ICT and Internet's role in knowledge management as well as IT department to accept knowledge management implementation technology in LHRIA, on uses of ICT/Internet to enhance knowledge of service providers, on skilled workforce, managerial skills and involvement of them in the planning and implementation of new knowledge management adoption. This result suggests that numerous improvements are needed for effective implementation and use of knowledge management in LHRIA.

Items	People	Samples	Mean(M)	Standard deviation(SD)
PEO31	Your agency has policy makers who identify and prioritize to create awareness about ICT.	120	3.083	0.962
PEO32	Your agency has programs in place to train the users for knowledge management.	120	3.217	0.993
PEO33	Your agency uses ICT/Internet assist to enhance knowledge of service providers.	120	2.742	0.996
PEO34	Your agency has a plan in place to involve employees in the planning and implementation of new knowledge management adoption.	120	3.1	0.917
PEO35	Policy makers, government officials and employees prefer knowledge management to alleviate the shortage of employees in your agency.	120	2.942	0.994
PEO36	Your agency provides knowledge management training for the agency's employees.	120	3.167	1.051
	No of items= 6 Average of mean PEO=3.04			

Table 6.3. Statistics for the items related to people construct

The mean score for culture construct, all its items are lower than the mean score of expected readiness level (Melr =3.4), as indicated below in the table 6.4, the mean score of other items of culture construct are between mean score 2.6 and Melr =3.4, which implies that not ready, needs some work. This indicate that, the needs of numerous improvement on the area of knowledge management tools, importance of exchanging knowledge and experiences between the employees that help to improve the quality of productivity and service in LHRIA and on trust in the knowledge management implementation.

Items	Culture	Samples	Mean(M)	Standard deviation(SD)
CUL42	Knowledge management can improve the quality of productivity and service in your agency.	120	3.167	0.96
CUL43	Your agency has a trust that is considered as challenges for the KM adoption.	120	3.133	1.04
	No of items= 2 Average of mean CUL= 3.15			

Table 6.4. Statistics for the items related to culture construct

The summary of results of the four constructs of the research model is presented in Table 6.5. Cross-referencing with the Aydin and Tasci's assessment model was made. According to the Aydin and Tasci's assessment model, all of the categories of constructs Average of mean (M) are between 2.6 and 3.4 which indicate not ready, needs some work. This result revealed that, LHRIA is not reach the level of readiness of Aydin and Tasci's assessment model. So it suggests that LHRIA need numerous improvements to adopt knowledge management.

NO	constructs	Average of mean(M)	result
1	Strategy	2.94	Not ready, needs some work
2	technology	3.06	Not ready, needs some work
3	People	3.04	Not ready, needs some work
4	Culture	3.15	Not ready, needs some work

Table 6.5. Summary of analysis results in the constructs of research model

Finally, based on Aydin and Tasci's assessment model, the finding of this research clearly indicates that the Strategy, Technology, People and Culture readiness of LHRIA that exist at the time of this research was not in the position of acceptable level for knowledge management adoption.

6.1.4. Addressing Research question

This research set two research questions in chapter one as:

- What factors contribute on LHRIA's readiness for adopting knowledge management?

  As discussed in the above, the result of this research revealed the constructs/factors which have significant impact on readiness for adopting KM. The revealed constructs are Strategy, Technology, People and Culture.

- To what extent LHRIA is ready to adopt knowledge management?

  To this research question, based on Aydin and Tasci's assessment model the result of this research showed LHRIA is **not ready, needs some work** which means, LHRIA is not ready for adopting KM. So LHRIA needs numerous work to be ready for adopting KM.

CHAPTER SEVEN

7.1. Introduction

The results of this research suggest a pertinent finding --Strategic readiness affects all other constructs of the research model but not directly the dependent variable. Even though, the study revealed that the independent variable didn't show direct effect on the dependent variable, the technology construct score is the lowest of all the significant constructs of the research model. As a result, it is considered to be the critical constructs that requires numerous improvement.

7.2. Conclusion

These days, knowledge management adoption becomes predominantly essential for organizations to create numerous innovations and deliver unique competitive advantages. This study initially aimed to search the constructs impacting successful implementation of KM and their relationship with each other and then determine the position of each construct readiness level for readiness aimed at KM implementation of LHRIA, in Addis Ababa, Ethiopia. And at last, assessing the level of readiness of LHRIA for knowledge management adoption.

This study covers internal constructs affecting adoption of knowledge management. The Readiness assessment model used in this study was adopted from Bakry (2004) and Jalaldeen, Karim and Mohamed Model (2009) and it has six constructs: Strategy, Technology, Organization, People, Culture and Environment. A number of items were evaluated under each constructs. Based on final analysis, I determined constructs which significantly influence on readiness for KM adoption in LHRIA are strategy, technology, People and Culture as well as organization and environment constructs are rejected which have no significant impact on KM adoption. These significant constructs affect KM adoption with different weights. The results of this study revealed that strategy has no direct impact on readiness for adopting KM but it has indirect impact on readiness through Technology, People and Culture.

Even though the constructs of Strategy, Technology, People and Culture exhibit positive impact on knowledge management adoption, People has strongest impact on KM adoption from the constructs that have impacts on KM adoption. And also Strategy has the strongest impact on

People from constructs it impacts on. This also shows that the highest indirect impact of strategy on Readiness for knowledge management adoption through People.

The result of this research, based on Aydin and Tasci's assessment model shows that computed mean of each factors (Strategy, Technology, People and Culture) that has significant impact on KM adoption is below the expected level of readiness (mean < 3.4) which indicates not ready, needs some work. This implies LHRIA need numerous improvements to adopt knowledge management.

The overall descriptive and inferential analysis of the results of this research revealed that, at the moment, the LHRIA Surveyed are not yet ready for implementing KM.

7.3. Contribution of the Study

Research's conducted to solve a single problem and/or groups of problems with in specific area. Research could be conducted to fill the gap which are not address in previous research work or could be new or the extension of the prior research work. Based on the above context the contribution of this research work listed as follow:-

The first contribution of this research work is, it gives a general overview of knowledge management and the constructs impact on its implementation to the managers and the employees of LHRIA. As I found, many local research works are done on knowledge sharing in certain organization except the research done on readiness for KM implementation of health institution found in Addis Ababa. Moreover I couldn.t get researches which are done on readiness for KM implementation in land sector at all. Therefore, besides filling the gap in local research work in the readiness for Knowledge management adoption, this research work can be starting point and bench mark for the next researchers which will be done in land sector.

The second contribution of this research is, the research addressed the main factors of knowledge management which are related and have positive and significant impact on KM implementation. Therefore, the findings of this study provide significant contribution to land sectors as well as to other organization in relation to readiness for KM implementation.

The third contribution of this study, the results found in the study that the Strategy, Technology, People and culture are significantly and positively associated with the LHRIA's readiness for KM implementation. Accordingly, LHRIA should consider these knowledge management constructs as a common standard and practice, employees should be given sufficient resources to generate and develop new Ideas, share their knowledge and experience about KM. It helps LHRIA to explore and utilize opportunities for KM implementation. As a result of this, LHRIA can achieve innovations and enhance their performance.

The fourth and final contribution of this study, the results of the study can provide a direction to organisation's when considering readiness and significant factors to implementing KM. In addition, it advances the theory of adoption behavior and contributes to the foundation for future research aimed at improving my understanding of KM factors, LHRIA and its employee's behavior.

7.4. Limitations of the Study

This study did not investigate an all factors of knowledge management (like incentive) that could impact on readiness for knowledge management implementation. This study used knowledge management constructs that have impact on KM adoption based on literature review of articles which are done in the area not related to land sector.

Even though the research instrument was derived from scales that were previously validated there is no guarantee for clearly understanding the research instrument by some respondents.it is a challenge to get research questionnaires directly related KM readiness. Therefore, it is mandatory to modify the adopted questionnaires and assumed that scales responses accurately reflect the respondent's level of agreement with each question. Because the survey required responses to all questions prior to submission, this limitation could potentially apply to the entire survey or even just portions of it.

7.5. Recommendation for LHRIA

After observing the finding of this research, the researcher came up with the following recommendations:

- LHRIA should prepare a training for its employees on the concept, benefit and management of KM for the purpose of awareness creation.
- Organizational strategy of LHRIA about KM implementation should be assessed in accordance with element of strategy that are required for KM implementation.
- LHRIA to work on institutional policies to promote and manage use of knowledge, direction, commitment and plan of it for knowledge management implementation as well as works on the area of ICT awareness and ICT training of human resources, ICT and information infrastructure, e-service infrastructure and ICT support.
- To works on the area of uses of Internet for information exchange, hardware and software required for knowledge management, knowledge workers and developers and also on the security options that is required for knowledge management.
- To works on awareness about ICT and Internet's role in knowledge management as well as on uses of ICT/Internet to enhance knowledge based service, on skilled workforce, managerial skills and involvement of them in the planning and implementation of knowledge management.
- LHRIA should employ manager with managerial skill, skilled workforce in KM and allow the involvement of them in the planning and implementation of KM.
- To work on the value Knowledge management on products and services, on the reduction of unprecedented risk of failure, on its employees to changes in Knowledge management processes and on mutual trust when employees exchange work-related information in LHRIA.
- Should encourage its employees to develop trust, cooperation, knowledge determination, and documentation and evaluation techniques.

- The employees should be encouraged to discover and develop new ways of KM implementation to achieve the goals of the organization.
- Finally both top and the middle level manager and employees of LHRIA should address which element of knowledge management is not address properly and find out the solution to implement KM and met their vision of providing quality service to their customers and generate revenue.

7.6. Recommendation for Future Research

- This research focuses on one sector of Land Development and Administration found in Addis Ababa City. However, assessing all the sectors may help to identify the level of readiness for knowledge management implementation in Land Development and Administration. Further studies should consider all sectors to obtain a more conclusive and generalizable result of KM implementation in land sector.

- This research focus on some variables that have impact on KM adoption and assessing the level of readiness for KM implementation. Therefore, further research can be conducted on other variables of readiness assessment model to provide greater stability to research findings in this area.

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Appendix I

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	**P Values**
CUL42 <- culture	0.911	0.910	0.013	68.383	0.000
CUL43 <- culture	0.894	0.893	0.020	44.926	0.000
ENV51 <- Environment	0.787	0.783	0.052	15.052	0.000
ENV52 <- Environment	0.891	0.891	0.021	41.519	0.000
ENV56 <- Environment	0.770	0.767	0.058	13.351	0.000
ORG26 <- organization	0.717	0.710	0.062	11.637	0.000
ORG28 <- organization	0.852	0.852	0.027	32.072	0.000
ORG29 <- organization	0.848	0.848	0.026	33.006	0.000
PEO31 <- people	0.738	0.737	0.059	12.584	0.000
PEO32 <- people	0.873	0.874	0.020	43.021	0.000
PEO33 <- people	0.735	0.731	0.052	14.195	0.000
PEO34 <- people	0.784	0.782	0.044	17.919	0.000
PEO35 <- people	0.733	0.731	0.050	14.568	0.000
PEO36 <- people	0.810	0.810	0.038	21.344	0.000
RDN61 <- Readiness	0.902	0.902	0.015	59.619	0.000
RDN63 <- Readiness	0.798	0.796	0.040	19.852	0.000
RDN66 <- Readiness	0.868	0.868	0.026	32.958	0.000
STR10 <- Strategy	0.796	0.793	0.048	16.415	0.000
STR4 <- Strategy	0.764	0.762	0.042	18.323	0.000
STR5 <- Strategy	0.747	0.743	0.052	14.445	0.000
STR6 <- Strategy	0.773	0.772	0.036	21.451	0.000
STR9 <- Strategy	0.771	0.771	0.034	22.812	0.000
TEC12 <- technology	0.841	0.840	0.033	25.136	0.000
TEC13 <- technology	0.877	0.876	0.023	37.774	0.000
TEC14 <- technology	0.824	0.822	0.036	22.615	0.000
TEC20 <- technology	0.798	0.796	0.039	20.410	0.000

Table 5.15. T-statistic bootstrapping outer loading result

Appendix II

Phase 1 Research questionnaires for independent constructs

Dear sir/madam

I am Fikru Mamo Wolde, MSC student in Addis Ababa University, Ethiopia. Currently, my position is system administrator in landholding registration and information agency (LHRIA), in Addis Ababa City administration.

Now I am conducting a research on readiness of LHRIA to adopt knowledge management and identification of factors that have major impact on it. It will be done as part of the partial fulfillment of my Master Degree in Information Science at Addis Ababa University School of Informatics Department of Information Science.

The research is aimed to assess the readiness for KM adoption and identifying the factors that have effects on it in the agency as well as to show the gap or proficient of the agency to KM adoption.

Your responses will be strictly confidential and individual participants will not be identified in any reports or publications and also shall not be used for other purposes other than the intended aim of this research. Your answer is very important for the success of this study and it is highly appreciated. I kindly request you to carefully read all the questions and give your genuine answers based on your awareness of the present condition at your agency.

If you have any inquiry, please feel free and contact me at Fikru.mam@gmail.com

Yours sincerely

Fikru Mamo

Email: Fikru.mam@gmail.com

Tel: +251911094296

NB: - Knowledge Management (KM) uses a process of identifying, capturing, retrieving, sharing and evaluating all enterprises information assets which include databases, documents, policies, procedures, and experience stored in individual's heads. It has been growing rapidly and it is a decisive factor for the competitive advantage of the business organization.

I. PART 1

Personal Data

1. What is your Department /Profession in the agency?
   A. IT/Cadastral B. Manager /administrator C. Other, Please specify_____
2. Sex: A. Male B. Female
3. Age(in year): A. 18-30 B. 31-40 C. Above 40
4. Your Education level: A. First Degree B. Masters C. Above Masters
5. Total Year of experience in land sector
   A. < 3 years B. 3-5 years C. 6-10 years D. Above 10 years

II. PART 2

Hint: in Likert scale the numbers from 1-5 denote as follow 1= strongly agree 2= agree 3=uncertain 4= disagree 5= strongly disagree

The following statements are intended to measure the extent to which the **strategy readiness** of LHRIA impact on knowledge management implementation. Please select the correct answer by putting tick sign (√) on the scale ranging strongly agree through Strongly Disagree in the appropriate space provided.

No.	strategy construct measures	Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree
1	your agency has a clear stated mission and vision about knowledge management					
2	your agency has sufficient support from government that affect customer willingness for knowledge management implementation					
3	Your agency has policies of land in place to promote and manage use of knowledge.					

No.	strategy construct measures	Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree
4	Your agency has direction, commitment and plan for knowledge management implementation.					
5	Your agency has institutional policies in place to promote and manage use of knowledge.					
6	Your agency has a plan that is needed and accessible by human resources for ICT awareness and ICT training to prepare readiness to adopt knowledge management					
7	Your agency has a future development plan for basic ICT and information infrastructure, e-service infrastructure and ICT support to adopt knowledge management					
8	Your agency has implementation plan for new knowledge management initiative that includes proper budgeting and identification of resources.					
9	Your agency has an appropriate plan for evaluation of knowledge management initiative.					
10	Your agency's top management support for adopting knowledge management.					
11	Your agency top management members and IT staffs are usually inspire knowledge management implementation.					

The following statements are intended to measure the extent to which the **technology readiness** of LHRIA impact on knowledge management implementation. Please select the correct answer by putting tick sign (√) on the scale ranging strongly agree through Strongly Disagree in the appropriate space provided.

No.	Technology construct measures	Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree
1	Your agency has an effective laws to protect consumer privacy					
2	Your agency uses Internet for information exchange with other land sectors.					
3	The hardware and software required for the proposed project are readily available.					
4	The Hardware and software required for the proposed project are readily affordable.					
5	The required ICT (telephone/internet/bandwidth) is easily available to adopt knowledge management in your agency.					
6	The required ICT (telephone/internet/bandwidth) is easily affordable to adopt knowledge management in your agency.					
7	Your agency has knowledge workers and developers to adopt knowledge management.					
8	Your agency has security options that are strong enough to fulfill the current security demand.					

The following statements are intended to measure the extent to which the **organization readiness** of LHRIA impact on knowledge management implementation. Please select the correct answer by putting tick sign (√) on the scale ranging strongly agree through Strongly Disagree in the appropriate space provided.

No.	Organization construct measures	Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree
1	Your agency emphasis on the development of human resources, teamwork, employee commitment for KM adoption.					
2	Your agency has a clear idea of why and how to proceed throughout the process of Knowledge management.					
3	Your agency's policies are in place to promote and manage use of knowledge management.					
4	Your agency has vision of planning of knowledge management adoption.					
5	Your agency has high bandwidth connectivity to speed up downloading and attaching files.					
6	Your agency has network connection which is reliable and affordable in addition to providing technical assistance for the agency's employees.					
7	Government's rules and regulations are one of the major inspire mechanisms causing the agency to use knowledge management.					
8	Your agency has an act, policy, proclamation, and signed agreement which are influencing the adoption and use of knowledge management.					

The following statements are intended to measure the extent to which the **people readiness** of LHRIA impact on knowledge management implementation. Please select the correct answer by putting tick sign (√) on the scale ranging strongly agree through Strongly Disagree in the appropriate space provided

No.	people construct measures	Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree
1	Awareness of ICT and Internet's role in knowledge management exists among senior level managers in your agency.					
2	Your agency has policy makers who identify and prioritize to create awareness about ICT.					
3	Your agency has programs in place to train the users for knowledge management.					
4	Your agency uses ICT/Internet assist to enhance knowledge of service providers.					
5	Your agency has a plan in place to involve employees in the planning and implementation of new knowledge management adoption.					
6	Policy makers, government officials and employees prefer knowledge management to alleviate the shortage of employees in your agency.					
7	Your agency provides knowledge management training for the agency's employees.					
8	Your agency has comfort in using ICT/internet among users of the proposed knowledge management adoption.					
9	Your agency has skilled work force to deal with knowledge management.					
10	IT department would accept knowledge management implementation technology in your agency.					
11	Your agency has technical and managerial skills on the use of technological innovation					

The following statements are intended to measure the extent to which the **culture readiness** of LHRIA impact on knowledge management implementation. Please select the correct answer by putting tick sign (√) on the scale ranging strongly agree through Strongly Disagree in the appropriate space provided.

No.	culture construct measures	Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree
1	Your agency has a clear and understandable interaction with knowledge management tools.					
2	Knowledge management can improve the quality of productivity and service in your agency.					
3	Your agency has a trust that is considered as challenges for the KM adoption.					
4	Making change on existing operation trend would call reduction unprecedented risk of failure in your agency.					
5	Your agency experience changes in the way knowledge is managed.					
6	Your agency and its employees are ready if changes in KM processes are implemented.					
7	There is mutual trust when employees exchange work-related information in your agency.					
8	Your agency's culture supports and recognizes the importance of exchanging knowledge and experiences between the employees.					
9	Your agency employees have been influenced by culture to accept knowledge management					

The following statements and questions are intended to measure the extent to which the **environment readiness** of LHRIA impact on knowledge management implementation. Please select the correct answer by putting tick sign (√) on the scale ranging strongly agree through Strongly Disagree in the appropriate space provided.

No.	Environment construct measures	Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree
1	Your agency communicate with its stakeholders electronically.					
2	ICT is currently used for communication between your agency, its branches and other land sectors					
3	Your agency has an efficient and affordable support from the local IT industry.					
4	Your agency has adequate budget to pay for Internet					
5	Your agency belief in science and technology-sponsored knowledge management implementation.					
6	Your agency has an efforts to cover the cost of knowledge management implementation.					
7	Your agency has reliable and efficient telecommunication infrastructure.					
8	Your agency has relevant material which is available in language(s) easily understood by all the staff and other users of knowledge.					
9	Inconsistency of electric power supply affects the use and adoption of knowledge management in your agency.					
10	Your agency has basic infrastructure service for the surrounding environment for KM implementation.					
11	Your agency workplace settings and format of meetings encourage informal knowledge exchange.					

Phase 2 Research questionnaires for dependent constructs

Dear sir/madam

I am Fikru Mamo Wolde, MSC student in Addis Ababa University, Ethiopia. Currently, my position is system administrator in landholding registration and information agency (LHRIA), in Addis Ababa City administration.

Now I am conducting a research on readiness of LHRIA to adopt knowledge management and identification of factors that have major impact on it. It will be done as part of the partial fulfillment of my Master Degree in Information Science at Addis Ababa University School of Informatics Department of Information Science.

The research is aimed to assess the readiness for KM adoption and identifying the factors that have effects on it in the agency as well as to show the gap or proficient of the agency to KM adoption.

Your responses will be strictly confidential and individual participants will not be identified in any reports or publications and also shall not be used for other purposes other than the intended aim of this research. Your answer is very important for the success of this study and it is highly appreciated. I kindly request you to carefully read all the questions and give your genuine answers based on your awareness of the present condition at your agency.

If you have any inquiry, please feel free and contact me at Fikru.mam@gmail.com

Yours sincerely

Fikru Mamo

Email: Fikru.mam@gmail.com

Tel: +251911094296

III. PART 1

Personal Data

6. What is your Department /Profession in the agency?

   A. IT/Cadastral B. Manager /administrator C. Other, Please specify_____

7. Sex: A. Male B. Female
8. Age(in year): A. 18-30 B. 31-40 C. Above 40
9. Your Education level: A. First Degree B. Masters C. Above Masters
10. Total Year of experience in land sector

    A. < 3 years B. 3-5 years C. 6-10 years D. Above 10 years

PART 2

Hint: in Likert scale the numbers from 1-5 denote as follow 1= strongly agree 2= agree 3=uncertain 4= disagree 5= strongly disagree

The following statements are intended to measure the extent to which the **readiness of LHRIA to knowledge management implementation.** Please select the correct answer by putting tick sign (√) on the scale ranging strongly agree through Strongly Disagree in the appropriate space provided.

No.	readiness construct measures	Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree
1	Your agency is ready to adopt the use of Knowledge Management System					
2	Your agency is ready to implement Knowledge Management that results positive outcome					
3	Your agency has achieved high level knowledge management readiness.					
4	Your agency has developed a readiness framework that links knowledge management activities to strategic outcomes.					
5	Your agency is highly motivated and Enthusiastic to adopt Knowledge management system					
6	You agency has been capable of fulfilling all the requirements of Knowledge Management implementation.					

Appendix III

		Count	Percent (%)	Mean	Median	Min	Max	Standard Deviation	Excess Kurtosis	Skewness
Department	IT/Cadastral	42	35	1.437	1	1	3	0.575	-0.125	0.924
	Manager/Administrator	73	60.83							
	Other	5	4.17							
Sex	Male	97	80.83	1.193	1	1	2	0.395	0.484	1.573
	Female	23	19.17							
Age	18-30	77	64.17	1.42	1	1	3	0.601	0.284	1.136
	31-40	36	30.00							
	Above 40	7	5.83							
Education	First Degree	104	86.67	1.134	1	1	2	0.341	2.757	2.171
	Masters	16	13.33							
	Above Masters	0	0.00							
Experience	< 3 years	30	25.00	1.908	2	1	3	0.778	-1.337	0.164
	3-5 years	43	35.83							
	6-10 years	37	30.83							
	Above 10 years	10	8.33							
your agency has a clear stated mission and vision about knowledge management (STR1)	Strongly Agree	26	21.67	2.5	2	1	5	1.133	-0.8	0.348
	Agree	39	32.50							
	Uncertainty	29	24.17							
	Disagree	21	17.50							
	Strongly Disagree	5	4.17							

your agency has sufficient support from government that affect customer willingness for knowledge management implementation (STR2)	Strongly Agree	7	5.83	2.908	3	1	5	0.992	-0.5	0.186
	Agree	37	30.83							
	Uncertainty	43	35.83							
	Disagree	26	21.67							
	Strongly Disagree	7	5.83							
Your agency has policies of land in place to promote and manage use of knowledge. (STR3)	Strongly Agree	16	13.33	2.342	2	1	5	0.89	0.37	0.705
	Agree	63	52.50							
	Uncertainty	27	22.50							
	Disagree	12	10.00							
	Strongly Disagree	2	1.67							
Your agency has direction, commitment and plan for knowledge management implementation. (STR4)	Strongly Agree	12	10.00	2.608	2	1	5	0.942	-0.8	0.196
	Agree	49	40.83							
	Uncertainty	34	28.33							
	Disagree	24	20.00							
	Strongly Disagree	1	0.83							
Your agency has institutional policies in place to promote and manage use of knowledge. (STR5)	Strongly Agree	12	10.00	2.717	3	1	5	0.968	-0.7	0.039
	Agree	40	33.33							
	Uncertainty	40	33.33							
	Disagree	26	21.67							

	Strongly Disagree	2	1.67							
Your agency has a plan that is needed and accessible by human resources for ICT awareness and ICT training to prepare readiness to adopt knowledge management (STR6)	Strongly Agree	7	5.83	2.925	3	1	5	1.05	-0.7	0.239
	Agree	41	34.17							
	Uncertainty	35	29.17							
	Disagree	28	23.33							
	Strongly Disagree	9	7.50							
Your agency has a future development plan for basic ICT and information infrastructure, e-service infrastructure and ICT support to adopt knowledge management (STR7)	Strongly Agree	8	6.67	2.708	3	1	5	0.943	0.08	0.497
	Agree	46	38.33							
	Uncertainty	45	37.50							
	Disagree	15	12.50							
	Strongly Disagree	6	5.00							
Your agency has implementation plan for new knowledge management initiative that includes proper budgeting and identification of resources. (STR8)	Strongly Agree	3	2.50	2.992	3	1	5	0.917	-0.5	0.213
	Agree	36	30.00							
	Uncertainty	46	38.33							
	Disagree	29	24.17							
	Strongly Disagree	6	5.00							

Your agency has an appropriate plan for evaluation of knowledge management initiative. (STR9)	Strongly Agree	5	4.17	3.175	3	1	5	0.928	-0.3	-0.3
	Agree	22	18.33							
	Uncertainty	46	38.33							
	Disagree	41	34.17							
	Strongly Disagree	6	5.00							
Your agency's top management support for adopting knowledge management. (STR10)	Strongly Agree	4	3.33	3.292	3	1	5	1.003	-0.6	-0.22
	Agree	24	20.00							
	Uncertainty	37	30.83							
	Disagree	43	35.83							
	Strongly Disagree	12	10.00							
Your agency top management members and IT staffs are usually inspire knowledge management implementation. (STR11)	Strongly Agree	5	4.17	2.708	3	1	5	0.841	0.09	0.429
	Agree	47	39.17							
	Uncertainty	49	40.83							
	Disagree	16	13.33							
	Strongly Disagree	3	2.50							
Your agency has an effective laws to protect consumer privacy (TEC12)	Strongly Agree	8	6.67	3.092	3	1	5	1.118	-0.9	-0
	Agree	33	27.50							
	Uncertainty	32	26.67							
	Disagree	34	28.33							

	Strongly Disagree	13	10.83							
Your agency uses Internet for information exchange with other land sectors. (TEC13)	Strongly Agree	5	4.17	3.108	3	1	5	0.981	-0.5	-0.01
	Agree	28	23.33							
	Uncertainty	45	37.50							
	Disagree	33	27.50							
	Strongly Disagree	9	7.50							
The hardware and software required for the proposed project are readily available. (TEC14)	Strongly Agree	5	4.17	2.867	3	1	5	0.865	-0.2	0.107
	Agree	36	30.00							
	Uncertainty	52	43.33							
	Disagree	24	20.00							
	Strongly Disagree	3	2.50							
The Hardware and software required for the proposed project are readily affordable. (TEC15)	Strongly Agree	6	5.00	2.708	3	1	5	0.85	0.08	0.356
	Agree	45	37.50							
	Uncertainty	50	41.67							
	Disagree	16	13.33							
	Strongly Disagree	3	2.50							
The required ICT (telephone/internet/bandwidth)	Strongly Agree	3	2.50	3.142	3	1	5	1.09	-1.1	0.183
	Agree	40	33.33							

is easily available to adopt knowledge management in your agency. (TEC16)	Uncertainty	29	24.17							
	Disagree	33	27.50							
	Strongly Disagree	15	12.50							
The required ICT (telephone/internet/bandwidth) is easily affordable to adopt knowledge management in your agency. (TEC17)	Strongly Agree	7	5.83	2.9	3	1	5	1.114	-0.8	0.384
	Agree	48	40.00							
	Uncertainty	27	22.50							
	Disagree	26	21.67							
	Strongly Disagree	12	10.00							
Your agency has knowledge workers and developers to adopt knowledge management. (TEC18)	Strongly Agree	14	11.67	2.342	2	1	5	0.851	0.68	0.753
	Agree	18	15.00							
	Uncertainty	29	24.17							
	Disagree	10	8.33							
	Strongly Disagree	2	1.67							
Your agency has adequate local support to address most of the problems related to proposed use. (TEC19)	Strongly Agree	11	9.17	2.65	3	1	5	0.954	-0.4	0.29
	Agree	47	39.17							
	Uncertainty	38	31.67							
	Disagree	21	17.50							
	Strongly Disagree	3	2.50							

Your agency has security options that are strong enough to fulfill the current security demand. (TEC20)	Strongly Agree	5	4.17	3.183	3	1	5	1.072	-0.7	0.078
	Agree	29	24.17							
	Uncertainty	41	34.17							
	Disagree	29	24.17							
	Strongly Disagree	16	13.33							
Your agency emphasis on the development of human resources, teamwork, employee commitment for KM adoption. (ORG21)	Strongly Agree	14	11.67	2.625	3	1	5	1.001	-0.6	0.257
	Agree	46	38.33							
	Uncertainty	34	28.33							
	Disagree	23	19.17							
	Strongly Disagree	3	2.50							
Your agency has a clear idea of why and how to proceed throughout the process of Knowledge management. (ORG22)	Strongly Agree	8	6.67	3.092	3	1	5	1.118	-0.9	-0
	Agree	33	27.50							
	Uncertainty	32	26.67							
	Disagree	34	28.33							
	Strongly Disagree	13	10.83							
Your agency's policies are in place to promote and manage use of knowledge management. (ORG23)	Strongly Agree	7	5.83	2.85	3	1	5	1.014	-0.7	0.258
	Agree	45	37.50							
	Uncertainty	33	27.50							
	Disagree	29	24.17							

	Strongly Disagree	6	5.00							
Your agency has vision of planning of knowledge management adoption. (ORG24)	Strongly Agree	3	2.50	2.858	3	1	5	0.897	-0.5	0.355
	Agree	45	37.50							
	Uncertainty	42	35.00							
	Disagree	26	21.67							
	Strongly Disagree	4	3.33							
Your agency has high bandwidth connectivity to speed up downloading and attaching files. (ORG25)	Strongly Agree	7	5.83	2.967	3	1	5	1.11	-1	0.215
	Agree	44	36.67							
	Uncertainty	26	21.67							
	Disagree	32	26.67							
	Strongly Disagree	11	9.17							
Your agency has network connection which is reliable and affordable in addition to providing technical assistance for the agency's employees. (ORG26)	Strongly Agree	10	8.33	2.842	3	1	5	1.103	-0.8	0.282
	Agree	45	37.50							
	Uncertainty	28	23.33							
	Disagree	28	23.33							
	Strongly Disagree	9	7.50							
Government's rules and regulations are one of the	Strongly Agree	15	12.50	2.675	3	1	5	1.089	-0.6	0.365
	Agree	45	37.50							

major inspire mechanisms causing the agency to use knowledge management. (ORG27)	Uncertainty	31	25.83							
	Disagree	22	18.33							
	Strongly Disagree	7	5.83							
Your agency has an act, policy, proclamation, and signed agreement which are influencing the adoption and use of knowledge management. (ORG28)	Strongly Agree	5	4.17	2.917	3	1	5	0.971	-0.6	0.224
	Agree	41	34.17							
	Uncertainty	39	32.50							
	Disagree	29	24.17							
	Strongly Disagree	6	5.00							
Knowledge sharing across departmental boundaries are actively encouraged and rewarded in your agency (ORG29)	Strongly Agree	9	7.50	2.8	3	1	5	0.98	-0.5	0.198
	Agree	40	33.33							
	Uncertainty	42	35.00							
	Disagree	24	20.00							
	Strongly Disagree	5	4.17							
Awareness of ICT and Internet's role in knowledge management exists among senior level managers in your agency. (PEO30)	Strongly Agree	10	8.33	2.783	3	1	5	0.95	-0.5	0.036
	Agree	37	30.83							
	Uncertainty	45	37.50							
	Disagree	25	20.83							
	Strongly Disagree	3	2.50							

Your agency has policy makers who identify and prioritize to create awareness about ICT. (PEO31)	Strongly Agree	4	3.33	3.083	3	1	5	0.962	-0.5	0.115
	Agree	30	25.00							
	Uncertainty	47	39.17							
	Disagree	30	25.00							
	Strongly Disagree	9	7.50							
Your agency has programs in place to train the users for knowledge management. (PEO32)	Strongly Agree	3	2.50	3.217	3	1	5	0.993	-0.6	0.068
	Agree	27	22.50							
	Uncertainty	44	36.67							
	Disagree	33	27.50							
	Strongly Disagree	13	10.83							
Your agency uses ICT/Internet assist to enhance knowledge of service providers. (PEO33)	Strongly Agree	6	5.00	2.742	2	1	5	0.996	-0.5	0.541
	Agree	55	45.83							
	Uncertainty	29	24.17							
	Disagree	24	20.00							
	Strongly Disagree	6	5.00							
Your agency has a plan in place to involve employees in the planning and implementation of new	Strongly Agree	1	0.83	3.1	3	1	5	0.917	-0.7	0.259
	Agree	34	28.33							
	Uncertainty	45	37.50							
	Disagree	32	26.67							

knowledge management adoption. (PEO34)	Strongly Disagree	8	6.67							
Policy makers, government officials and employees prefer knowledge management to alleviate the shortage of employees in your agency.(PEO35)	Strongly Agree	7	5.83	2.942	3	1	5	0.994	-0.5	0.118
	Agree	35	29.17							
	Uncertainty	43	35.83							
	Disagree	28	23.33							
	Strongly Disagree	7	5.83							
Your agency provides knowledge management training for the agency's employees. (PEO36)	Strongly Agree	6	5.00	3.167	3	1	5	1.051	-0.7	-0.12
	Agree	29	24.17							
	Uncertainty	39	32.50							
	Disagree	39	32.50							
	Strongly Disagree	11	9.17							
Your agency has comfort in using ICT/internet among users of the proposed knowledge management adoption. (PEO37)	Strongly Agree	3	2.50	3.1	3	1	5	0.961	-0.4	0.253
	Agree	30	25.00							
	Uncertainty	50	41.67							
	Disagree	26	21.67							
	Strongly Disagree	11	9.17							
Your agency has skilled work force to deal with knowledge	Strongly Agree	10	8.33	2.658	2	1	5	0.97	-0.6	0.347
	Agree	51	42.50							

management. (PEO38)	Uncertainty	32	26.67							
	Disagree	24	20.00							
	Strongly Disagree	3	2.50							
IT department would accept knowledge management implementation technology in your agency. (PEO39)	Strongly Agree	13	10.83	2.508	2	1	5	0.949	0.1	0.599
	Agree	55	45.83							
	Uncertainty	34	28.33							
	Disagree	14	11.67							
	Strongly Disagree	4	3.33							
Your agency has technical and managerial skills on the use of technological innovation (PEO40)	Strongly Agree	6	5.00	2.908	3	1	5	0.975	-0.4	0.241
	Agree	38	31.67							
	Uncertainty	44	36.67							
	Disagree	25	20.83							
	Strongly Disagree	7	5.83							
Your agency has a clear and understandable interaction with knowledge management tools. (CUL41)	Strongly Agree	5	4.17	2.892	3	1	5	0.947	-0.4	0.28
	Agree	40	33.33							
	Uncertainty	44	36.67							
	Disagree	25	20.83							
	Strongly Disagree	6	5.00							

Knowledge management can improve the quality of productivity and service in your agency. (CUL42)	Strongly Agree	4	3.33	3.167	3	1	5	0.96	-0.4	0.001
	Agree	25	20.83							
	Uncertainty	48	40.00							
	Disagree	33	27.50							
	Strongly Disagree	10	8.33							
Your agency has a trust that is considered as challenges for the KM adoption. (CUL43)	Strongly Agree	6	5.00	3.133	3	1	5	1.04	-0.8	-0.14
	Agree	31	25.83							
	Uncertainty	33	27.50							
	Disagree	41	34.17							
	Strongly Disagree	9	7.50							
Making change on existing operation trend would call reduction unprecedented risk of failure in your agency. (CUL44)	Strongly Agree	8	6.67	2.583	3	1	5	0.812	-0.1	0.246
	Agree	50	41.67							
	Uncertainty	47	39.17							
	Disagree	14	11.67							
	Strongly Disagree	1	0.83							
Your agency experience changes in the way knowledge is managed. (CUL45)	Strongly Agree	11	9.17	2.742	3	1	5	0.979	-0.8	0.056
	Agree	42	35.00							
	Uncertainty	36	30.00							
	Disagree	29	24.17							

	Strongly Disagree	2	1.67							
Your agency and its employees are ready if changes in KM processes are implemented. (CUL46)	Strongly Agree	18	15.00	2.3	2	1	5	0.862	0.58	0.638
	Agree	60	50.00							
	Uncertainty	32	26.67							
	Disagree	8	6.67							
	Strongly Disagree	2	1.67							
There is mutual trust when employees exchange work-related information in your agency. (CUL47)	Strongly Agree	15	12.50	2.317	2	1	5	0.816	0.38	0.562
	Agree	63	52.50							
	Uncertainty	32	26.67							
	Disagree	9	7.50							
	Strongly Disagree	1	0.83							
Your agency's culture supports and recognizes the importance of exchanging knowledge and experiences between the employees. (CUL48)	Strongly Agree	9	7.50	2.65	2	1	5	0.946	-0.5	0.397
	Agree	52	43.33							
	Uncertainty	34	28.33							
	Disagree	22	18.33							
	Strongly Disagree	3	2.50							
Your agency employees have been influenced by culture to	Strongly Agree	6	5.00	2.85	3	1	5	0.98	-0.3	0.415
	Agree	42	35.00							

accept knowledge management (CUL49)	Uncertainty	44	36.67							
	Disagree	24	20.00							
	Strongly Disagree	8	6.67							
Your agency communicate with its stakeholders electronically. (ENV50)	Strongly Agree	8	6.67	3.133	3	1	5	1.087	-0.7	-0.11
	Agree	28	23.33							
	Uncertainty	36	30.00							
	Disagree	36	30.00							
	Strongly Disagree	12	10.00							
ICT is currently used for communication between your agency, its branches and other land sectors (ENV51)	Strongly Agree	12	10.00	2.667	2	1	5	1.059	-0.8	0.405
	Agree	53	44.17							
	Uncertainty	23	19.17							
	Disagree	27	22.50							
	Strongly Disagree	5	4.17							
Your agency has an efficient and affordable support from the local IT industry. (ENV52)	Strongly Agree	8	6.67	2.892	3	1	5	0.998	-0.8	0.017
	Agree	39	32.50							
	Uncertainty	35	29.17							
	Disagree	34	28.33							
	Strongly Disagree	4	3.33							

Your agency has adequate budget to pay for Internet (ENV53)	Strongly Agree	23	19.17	2.308	2	1	5	0.998	0.51	0.822
	Agree	56	46.67							
	Uncertainty	27	22.50							
	Disagree	9	7.50							
	Strongly Disagree	5	4.17							
Your agency belief in science and technology-sponsored knowledge management implementation. (ENV54)	Strongly Agree	12	10.00	2.558	2	1	5	0.911	0.01	0.394
	Agree	49	40.83							
	Uncertainty	42	35.00							
	Disagree	14	11.67							
	Strongly Disagree	3	2.50							
Your agency has an efforts to cover the cost of knowledge management implementation. (ENV55)	Strongly Agree	13	10.83	2.692	3	1	5	0.938	-0.5	-0.02
	Agree	36	30.00							
	Uncertainty	48	40.00							
	Disagree	21	17.50							
	Strongly Disagree	2	1.67							
Your agency has reliable and efficient telecommunication infrastructure. (ENV56)	Strongly Agree	8	6.67	2.867	3	1	5	1.016	-0.7	0.176
	Agree	41	34.17							
	Uncertainty	36	30.00							
	Disagree	29	24.17							

	Strongly Disagree	6	5.00							
Your agency has relevant material which is available in language(s) easily understood by all the staff and other users of knowledge. (ENV57)	Strongly Agree	10	8.33	2.775	3	1	5	1.06	-0.6	0.378
	Agree	46	38.33							
	Uncertainty	33	27.50							
	Disagree	23	19.17							
	Strongly Disagree	8	6.67							
Inconsistency of electric power supply affects the use and adoption of knowledge management in your agency. (ENV58)	Strongly Agree	23	19.17	2.233	2	1	5	0.92	1.14	0.884
	Agree	59	49.17							
	Uncertainty	29	24.17							
	Disagree	5	4.17							
	Strongly Disagree	4	3.33							
Your agency has basic infrastructure service for the surrounding environment for KM implementation. (ENV59)	Strongly Agree	8	6.67	2.742	3	1	5	0.917	-0.4	0.211
	Agree	43	35.83							
	Uncertainty	44	36.67							
	Disagree	22	18.33							
	Strongly Disagree	3	2.50							
Your agency workplace settings and format of meetings	Strongly Agree	7	5.83	2.942	3	1	5	1.043	-0.7	0.207
	Agree	39	32.50							

encourage informal knowledge exchange. (ENV60)	Uncertainty	37	30.83							
	Disagree	28	23.33							
	Strongly Disagree	9	7.50							
Your agency is ready to adopt the use of Knowledge Management System (RDN61)	Strongly Agree	2	1.67	3.217	3	1	5	0.976	-0.7	0.149
	Agree	28	23.33							
	Uncertainty	45	37.50							
	Disagree	32	26.67							
	Strongly Disagree	13	10.83							
Your agency is ready to implement Knowledge Management that results positive outcome (RDN62)	Strongly Agree	16	13.33	2.492	2	1	5	0.983	-0.3	0.476
	Agree	53	44.17							
	Uncertainty	30	25.00							
	Disagree	18	15.00							
	Strongly Disagree	3	2.50							
Your agency has achieved high level knowledge management readiness. (RDN63)	Strongly Agree	5	4.17	3.142	3	1	5	1.027	-0.8	-0.1
	Agree	32	26.67							
	Uncertainty	33	27.50							
	Disagree	41	34.17							
	Strongly Disagree	9	7.50							

Your agency has developed a readiness framework that links knowledge management activities to strategic outcomes. (RDN64)	Strongly Agree	23	19.17	2.558	3	1	5	1.117	-0.5	0.361
	Agree	37	30.83							
	Uncertainty	37	30.83							
	Disagree	16	13.33							
	Strongly	7	5.83							
Your agency is highly motivated and Enthusiastic to adopt Knowledge management system (RDN65)	Strongly Agree	5	4.17	2.767	3	1	5	0.972	-0.6	0.486
	Agree	54	45.00							
	Uncertainty	30	25.00							
	Disagree	26	21.67							
	Strongly Disagree	5	4.17							
You agency has been capable of fulfilling all the requirements of Knowledge Management implementation. (RDN66)	Strongly Agree	4	3.33	3.067	3	1	5	1.014	-0.6	0.253
	Agree	34	28.33							
	Uncertainty	44	36.67							
	Disagree	26	21.67							
	Strongly Disagree	12	10.00							