E-READINESS FACTORS AND USAGE OF E-GOVERNMENT SERVICES IN THE PUBLIC SECTOR OF KENYA

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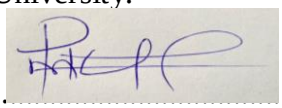
A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS, ECONOMICS AND TOURISM IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MANAGEMENT INFORMATION SYSTEMS) OF KENYATTA UNIVERSITY

MAY, 2023

DECLARATION

This research is my original work and has not been presented for an award of a degree in any other University.

Signature  ..... Date .....

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I hereby confirm that this research was carried out under my guidance and supervision.

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DEDICATION

I would like to inscribe this work to everyone who accorded me constant encouragement and support for playing a crucial role in successfully accomplishing it, especially my family and friends.

ACKNOWLEDGEMENT

I affirm the immense guidance and support accorded by my supervisor, Dr David Nzuki and appreciate for his invaluable patience throughout this academic journey. May God bless you abundantly sir.

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ABBREVIATIONS AND ACRONYMS

DCI	Directorate of Criminal Investigation
EOU	Ease of Use
ICT	Information Communication Technology
ID	Identity
IPRS	Integrated Population Registration Services
IT	Information Technology
KRA	Kenya Revenue Authority
NOFBI	National Fibre Optic Broadband Infrastructure
PBC	Perceived Behavioral Control
PEOU	Perceived Ease Of Use
PU	Perceived Usefulness
RAS	Refugee Affairs Secretariat
TAM	Technology Acceptance Model
TIMS	Transport Integrated Management System
TRA	Theory of Reasoned Action
VTC	Video Teleconferencing

OPERATIONAL DEFINITION OF TERMS

E-readiness Factors: This pertains to assessment of the current level of technology put in place as low or no technology put in place implies low level of e- readiness and strong reluctance of e-government usage. Factors of E-readiness are classified into the three following groups: technical, social and organizational factors.

E-governance: This refers to utilization of information systems within the government sector to facilitate and provide various services.

Organization Factors: This refers to the facilities and departments that are in existence in an organization. It consists of Management Support, ICT policy, Leadership and Funding.

Technological Factors: This refers to the information and communication facilities and departments that are in existence in an organization. It comprises of IT infrastructure, Connectivity and Service Quality.

Social Factors: These pertains to the characteristics of organizations that shape society's perception of E-government, administrative instructions, governmental laws, and social impact, such as Awareness, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU).

ABSTRACT

In the recent past, the automation and digitization of government services, also known as e-government, has made it possible for governments all over the world to make their services more effective, adequate, and accessible. The use of electronic government technologies has boosted transparency and accountability of public funds. However, e-government solutions have not fully been accepted by a number of developing countries. The Kenyan government has been striving and making sustainable progress to make available useful services and information through the internet platforms; but, usage of e-government remains really sluggish. This is primarily due to challenges with organizational, technological, and social aspects. The study sought to evaluate the nexus between e-readiness considerations on e-government services usage in Kenyan Public Sector. This research was formulated and carried out with the main aim to; carry out the investigation of the causal outcome link between technological, social, organizational factors and usage of e-government services in Kenya's public domain. The research was conducted making analytical reference to Theory of Planned Behavior and Technology Acceptance Model. Descriptive research design was also utilized in this study and it involved a target population of 21 ministries in the Kenyan government's public domain. The research adopted purposive sampling design. The study picked 3 respondents from each of the 21 ministries in Kenya, thereby leading to a sample size of 63. The study had a rate of response of 89 percent considered adequate. The research utilized descriptive and inferential statistics. Inferential statistical analysis included Pearson correlation and multivariate regression analysis. A considerable association between the e-readiness considerations was also noted while using the correlation analysis. These considerations included; social, organizational and technological factors and uptake of e-services in government. The regression analysis indicated that technological factors significantly affect the usage of these services in government. The study's findings also demonstrated a clear and substantial impact of organizational factors on the utilization of e-government services within Kenya's public service domain. The study also established that social factors significantly affected e-government services usage in Kenya's Public Sector. The recommendations of this research put much emphasis on the significance of establishing sufficient IT infrastructure by the Kenyan government within its ministries and departments, and prioritize service quality, improving the delivery of digital and technological services in Kenya's public sector, resulting in enhanced utilization and better serving the populace in terms of effectiveness and efficiency.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Conventionally, the use of e-government services pertains to provision of government's services to its citizens via the utilization of information technology. The systems offer interactions between the citizens and their government or businesses and their government directly using computers and internet services through government websites. The information systems used are effectively introduced into the public through ubiquitous participation and education to the of the public. It represents a new approach of managing and organizing public affairs through the introduction consistently employing information and communication technology as a catalyst for transformations (Mauro, 2017).

Globally, states at different levels have been discarding traditional services and adopting electronic services due to the massive growth in the information technology sector. In contrast with the past, most governments work towards establishing, executing and advancing their approaches to remodel services of government with the aid of digital technologies. The infrastructures for digital technologies are built on information and communication technology (ICT). These infrastructures ensure a strong foundation on which automated systems can be utilized. E-government refers to a collection of digital technologies employed by the government to extend services to its populace. The advent of automated services in ministries and departments, has compelled governments to investigate how relevant services might be made available

to the public in a timely and effective manner (Komba, 2016).

There are various E-government services in existence across the world. They may include E-services, E-democracy and participation, Government performance platform and social development and inclusion. The information and communication ministry has the responsibility of providing information systems which support decision making in government in tandem with the management level in order to ensure the systems' efficiency and effectiveness. ICT also sets frameworks and standards geared towards development of software applications for the government. It is also the responsibility of ICT to ensure development and implementation of policy on automation of government services, based on national communication capacity and infrastructure. Generally, countries which have adopted e-government services get a number of benefits. These are not limited to; Enhancement of government to citizen transactions; Enhancement of government to government transactions; Enhancement of citizen to government transactions; more efficiency; increased factor of cost effectiveness in public service delivery; communication between the government and its stakeholders (contractors, local authorities, citizens, consulters, special interest groups, other government agencies, users among others) is also enhanced; enhanced transparency in accountability of public funds; enhanced e-public participation; better planning using management information systems and enhanced monitoring & information sharing (Brabham and Guth,2017). However, most countries face challenges such as inadequate information technology infrastructure, lack of well-defined policies and inexperienced human capita development, thus hampering the efficient execution of e-government projects.

African countries are considered to have been left behind in taking up e-government projects. It can be remarkably due to late adoption of the Internet entirely by most governments of countries that are developing (Nwabufo, Umoru, & Olukotun, 2012). Most African countries are at the initial phase of automating their services. E-government furthermore facilitates enhanced communication among businesses and governments. Kenya has sufficiently introduced e-Government service that have increase the service provision and drastically brought down the rate of corruption (Nelson *et al*, 2009). The e-citizen platform, which is an open data platform comprising Kenya's census data and government reports generated from several ministries, houses e-government services in Kenya. It is a one-stop shop (the Huduma centres) for the citizens in need of individualized technology support to have a one on one engagement with the government services, for instance tax returns filing online. E-citizen portal is open to all Kenyan citizens above the age of eighteen (18) years.

1.1.1 Usage of E-government Services in Kenya

The Kenyan government offers various e-government services to its populace. These services are often in the form of digital platforms to facilitate among other things, academic processes and enhance service delivery. Examples of these services include: Business services (permits); KRA services (filing tax returns); Marriage services (registration and divorce); Transport industry services (driving licence, NTSA/TIMS services); Lands registry services (title deeds and allotment letters); Immigration services (national identity cards, birth and death events registration & certificate issuance, IPRS document verification services, border management services, RAS services, travel passports and visas); and DCI services (issuance of police clearance certificates). The current ICT projects in Kenya include; the Konza Techno city project,

county inter-connectivity and intra-connectivity projects, the National Fibre Optic Broadband Infrastructure (NOFBI), Presidential programme on digital talent and migration (E-learning and development of skills of the public).

Most of these projects are their initial stages and are facing various challenges. Some of these challenges include: resistance towards employment of e-government tools; the software and hardware components require a high capital investment which is not readily available in Kenya, thus leading to development in phases; poor understanding on existence of digital government services; internet services are not spread to the entire country, for instance, some of the remote places deal with challenges of higher priority like food insecurity and therefore consider internet use as a luxury; lack of user acceptance in technology matters since most old people have not embraced digital technology; there is significantly low priority given to technology infrastructure by the government of Kenya; barriers caused by policy-related sharing of information, for instance controlled access to information due to fear of breach of confidential information; and inadequate skilled labour in the e-government field.

Currently, the government has launched a registration drive 'huduma number' through 'huduma card' which involves digital data listing using biometrics and documents like national ID, passport, birth certificate and driving licence. This was spear headed by the Interior cabinet secretary, Fred Matiang'i, in April 2019. This initiative is geared towards improving transparency, security and service delivery by use of National Integrated Identity Management System (NIIMS). In a race to ensure all the Kenyans are registered to the system, the deadline was set at 18 May 2019. Government of Kenya (GoK) reiterated that the number will also be used to gain access to all government services as well as other organizations such as the the Kenya Revenue Authority

(KRA).

Despite targeting the entire Kenya's population, only little fraction has felt its influences. In 2013, the government of Kenya promised its citizens a digital and techno-savvy world and kept its promises by procuring the necessary technology gadgets. The big question is; Are the citizens using the purchased equipments or we are still stuck in the analogue world where we prefer using paper work and face to face interaction? The element of user acceptance still remains key in successful implementation of these systems. In this case, the targeted users were the citizens. The 2014 UN (United Nations) E-government index for development which is a relative ranking of nations worldwide based on e-participation and e-government readiness, Kenya is ranked at position 119 from a total of 193 countries. This was an improvement from the 2010 ranking that saw Kenya at position 124 an apparent manifestation Kenyans are steadily embracing the utilization of the e-government platforms (Mwangi, 2015).

E-Government can be viewed in form of the dissemination of services as well as messages through online mediums by government such as internet and any other technological mediums. This involves distributing modern services to people, organizations, and the entire societal members by way of extremely transforming the methods through which information is managed by governments (Kurdi & Randles, 2011). E-Government presence improves services that can be enjoyed by businesses and citizens in the country which ultimately leads to improvement in government service delivery. The degree of citizens' satisfactions can be enhanced by providing services 24/7, at the same time winning their acceptance of the sectors that are public (Alshehri & Drew, 2010). E-government may bring about considerable savings in terms

of cost to both the citizens and government in equal measure. These potential huge savings are dependent on use acceptance, which translates to how quickly usage rates increase.

However, using e-government services without a well-planned package might lead to failure, resulting in significant financial losses and unappealing products. E-Readiness holds significant importance in the efficacious implementation and utilization of automated services in providing services to the citizens (Ashaye & Irani, 2014; Komba, 2016). The measures of e-government services include the acceptance level, adoption level and efficiency of the implemented measures.

1.1.2 E-readiness Factors

E-readiness refers to an organization's willingness in embracing e-government which means intellectually and substantially ready to introduce e-government (Ssekakubo, Suleman & Marsden, 2011). It refers to the current level of technology put in place as low or no technology put in place implies low level of e- readiness and strong reluctance of e-government usage. The general public defines e-readiness as citizens' readiness to utilize digital government services. E-readiness factors are categorized into the three classes listed below: technical, social and organizational factors.

Technological readiness is the most vital factor in e- readiness. It depicts peoples' willingness to use technological infrastructure. The following are technological factors: internet access, hardware, bandwidth, software, organization's space and content. Similarly, a number of technologies are in existence to promote e-government in Kenya, they include radio, computers, television, the internet, mobile devices and a couple of others (Manduku, Kosgey & Sang, 2012).

Organizational factors include: organizational culture, experts, management permanence and organizational rules. The inadequate support from head of organizations has been identified with cost of ICT training to workers, acquiring and managing technologies as well as equipment for electronic government services (Shahadat, Mahbub & Che, 2012). Social factors the following; governmental rules, society's conception of E-government, administrative instructions and social influence (Komba, 2016). Social influence depicts the magnitude to which peers interfere with a system. It is a very significant factor in many area of the citizens' life and it is significant whether it is positive or negative.

The acceptability the electronic services offered by the government is contingent on the citizens' sureness in the government systems in place. In order to guarantee a success in implementation of e-government services, it becomes important to provide populace with a reliable assurance regarding the protection of their data, considering the exchange of personal information that takes place during system access. Misuse of data can result in low uptake and utilization of e-government services (Irani, 2013). The processes in place should also be capable of meeting citizens' requirements in a timely manner.

1.2 Statement of the problem

With the implementation of e-government utility services, governments realized the importance of assuring the availability, affordability, dependability, and efficiency of their services. Using the systems in place, e-governance had unmasked corrupt officials who misallocated meager resources through distortion of the priorities of the public while facilitation their lifestyles rather than making sure the citizens are well facilitated

(Bhatnagar & Singh, 2010; Ogema & Otika, 2013). Use of e- procurement systems led to increased transparency in accountability of public funds. However, e-government solutions had not fully been accepted by a number of developing countries. With an emphasis on Kenya, e-government solutions were not completely operational due to effect of the technological, organizational and social factors.

The Kenyan government has undertaken much efforts to enhance information dissemination and service delivery by leveraging on technology and advancements. However, the usage of e-government has considerably been slow moving. Failure might occur from a lack of a well-planned package, which can result in huge financial losses and unappealing items. As put forward by Aisuwaidi and Rajan (2013), ICT system was a foremost challenge to e-governments. To allow proper information distribution while opening new communication mediums as well as services delivery, both intranetworking and internetworking was needed (Tarus, Gichoya & Muumbo, 2015). It was essential to invest in robust IT infrastructure that could make optimal use of the emerging opportunities created by latest technologies and tools of communication as this will guarantee successful execution of services. Thus, the successful E-government usage of services in public Sector was noted to be highly dependent on e-readiness (Ashaye & Irani, 2014; Komba, 2016). “The current study was supported by the need to overcome utilization gaps in e-government services. It also focused on establishing the influence of e-readiness factors on usage e-government services in Kenya.

1.3 Objectives of the Study

1.3.1 General Objective of the Study

To examine the influence of E-readiness considerations on the usage of e-government

services in the Public Sector of Kenya.

1.3.2 Specific Objectives of the Study

The study sought to:

i) Investigate the influence of technological factors on the usage of e-government services in the Public Sector of Kenya.

ii) Evaluate the influence of organizational factors on the usage of e-government services in the Public Sector of Kenya.

iii) Examine the effects of social factors on usage of e-government services in Kenya's public sector.

1.4 Research Questions

The research sought answers to the following study questions:

i) What is the influence of technological factors on e-government services usage in the Kenyan Public Sector?

ii) What is the effect of Organizational factors on the e-government services usage in the Kenyan Public Sector?

iii) What is the influence of Social factors on e-government service usage in the Public Sector of Kenya?

1.5 Significance of the Study

The research findings provide a crucial basis for the development of policies that shape the implementation and use of e-government services. Similarly, it can help in identification of areas that require enhancement in line with the public demands, thus promoting user acceptance. Furthermore, the study will help the public by providing

information into e-government level usage in the country, reducing public opposition to adopting e-government services. This ultimately fosters the delivery of service and thus better output. Similarly, results from this research will help the public sector in Kenya to develop efficient e-government blueprint boost productivity.

In addition to the above, the Kenyan government can use this research to access if the technological infrastructure they invested meets their expectations. Through the results, they will look for the best methods to employ to ensure the investments meet the money value and therefore balancing the costs, revenue as well as good governance. Into the bargain, this study will provide scholars and researchers in a similar field or context with basic knowledge on e- readiness considerations and usage of e-government services in Kenya's national sector. The findings will serve as a guideline for future researchers interested in conducting further investigations in this particular field of study or a related area.

1.6 Scope of the Study

The study focused on 21 ministries in the Kenyan government that provide services through e-governance in Nairobi. The secondary data analysis was conducted employing a multiple regression model. The relationship between independent variables (social factors, technological factors and organizational factors) and dependent variables (usage of e-government services) is ascertained using multivariate linear regression.

1.7 Limitation of the Study

The main constraint of this research resides in the data collection method used. The

method relied mostly on the administration of a questionnaire to gather primary data. Using questionnaires as a data gathering technique, presents its own set of issues. For example, the respondents' attitude toward issuance of information may hold back some information needed for the research. This can largely be as a result of the fear of their words been twisted or used against them. The researcher however dealt with this threat by reassuring the people filling the questionnaires that their answers will be adopted strictly for the goal of academics.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter lays out a scholastic examination by presenting the essential theoretical foundations and assessing previous empirical studies related to e-readiness and usage of e-government services in Kenya's public sector. The chapter consists of the conceptualized structure, the reviewed summary alongside the gaps from research.

2.2 Theoretical Review

Theories connected to the aim of the study will be explored, including the theory of planned behavior, which offers understanding into various factors that influence a person's motive to undertake a specific activity. The technology acceptance paradigm, on the other hand, determines the extent to which it is deemed useful and the ease of use of digital breakthroughs.

2.2.1 Theory of Planned Behavior

This concept was compounded by Ajzen in 1985, which emanated from the Reasoned Action Theory (TRA). In line with the traditional TRA, the key feature of TPB is a person's intent in behaving a particular way action or carrying out certain action. In addition TPB investigates the problem of behaviors that are implemented without the free will of a person. Distinctively, the TPB is well known to be different from TRA in view of its extension of the elements of Perceived Behavioral Control (PBC) perceived behavioral control, that takes into consideration situations where a person doesn't have

total jurisdiction of his behavior. That may significantly be different with reference to activities and performance (Ajzen, 1991). TPB examines the entire notion of PBC to be inside a further general structure of connection between beliefs, intentions, attitude or behaviors. PBC is established to have an important effect on behavior and intent, affecting behavior directly or interactively.

In relevance to this study, Theory of Planned Behavior interpret and evaluate behaviors, the TPB model deals with attitude, skewed norms antecedents and supposed control of behavior. Notable, the TPB emphasizes the notion that behavior is an outcome of remarkable notions appropriate to a particular behavior. Such notions are seen as the paramount or important factors relating to the way an individual acts and his intentions. The Theory of Planned Behavior states that the following factors determine the behavioral intention of an individual to perform an activity, presumed behavior and normative control (Ajzen, 1991; Fusilier & Durlabhji, (2005). TPB acknowledges the significance of social, and other influential factors that impact the adoption and utilization of technology. (Khalifa & Shen, 2008). Additionally, it opines that intent to carry out an action is influenced by subjective norm, mind-set and supposed behavioral control. (Ajzen, 1991)

2.2.2 Technology Acceptance Model

As a consequent advancement of the TRA model, Davis in 1986 invented the (TAM) technology acceptance model, it examines the approval of IT demonstrated by a person. The TAM model is responsible for transmitting information and justification about computer approval factors with it generally recognized to reestablish the viewpoint notions of the TRA with 2 technology approval measures of PU and PEOU.

Distinctively, the TRA's skewed norms are not added in TAM as a causal factor of behavioral intents. However, whilst putting into consideration empirical confirmation, attitude construct was established to have been ignored in the final model because it was unable to adequately assist or mediate the attempt of PEOU on purpose, and due to the fact that the PU-BI link was seen as additionally important Davis *et al* in1989. Therefore, it is stressed that TAM proposes that PU is distinctly influenced by PEOU because of the conception that a technology is frequently held as additionally being helpful when it is easy to work with**.**

Technology Acceptance Model relevance to the study is linked to welcoming of a current technology determined its level of usage. Technology Acceptance Model suggested that PU and PEOU can be utilized to forecast the intent of the behavioral in accepting technology. PU is seen as the individual belief level in which technology is accepted to enhance the performance of a job whilst PEOU is the assumption that technology utilization is effort free (Davis, 1989; Fusilier & Durlabhji, 2005 Gitau & Nzuki, 2014). Hence, this theory backs two constructs, PU and PEOU. Therefore, the higher the acceptance of technological factors the higher the usage of e-government. Therefore, technological factors, for example technological equipment and facilities, should be adequate.

2.2.3 Unified Theory of Acceptance Use of Technology

According to UTAUT theoretical model, adoption of technology relies on the direct effect of performance expectancy and other factors expediting it (Venkatesh, 2003). In terms of performance, social impact, and anticipation, this theory supports TPB and TAM. It also incorporates the concept of facilitating conditions, particularly the organization component, which was not included in the previous models.

UTAUT clearly demonstrates that organizational management support and leadership impacts directly on e-government service utilization. Facilitating conditions in this context, refers to employees' insight that an organization supports a particular system in place (Venkatesh et al., 2003). Employees are given power over ICT systems through policies and leadership. Initial usage of a product or service is positively impacted by facilitating environments, which directly contribute to the intention to use. However, the influence of these environments decline after the initial usage. As a result, facilitating factors have a significant and direct effect on use behavior according to this model (Venkatesh et al., 2003). This means that better organized processes lead to greater use of e-government. Organizational elements such as ICT policies should be clearly defined and funded.

2.3 Empirical Review

This sub-section presents empirical studies on e-readiness factors, which include technical, social and organizational factors, and the use of government digital services. It brings out gaps in literature concerning the subject matter.

2.3.1 Technological Factors and Use of E-government Services

A research was undertaken with the aim of assessing ways in which e-government is been utilized in transmitting, promoting and enhancing business so as to ascertain real and possible difficulties encountered by government of UK (Hazlett and Hill, 2003). They realized problems of hardware, software and Information Communication Technology infrastructure as the three leading technological readiness factors that influence e-government services delivery.

A research by Bakry in 2004 initiated the STOPE model so as to give basis for multinational scheme linked to e-government readiness. Five dimensions established by the model include (policy, technology, institution, individual and surroundings). As stated, technology is among the elements of the model. From the viewpoint of technology, Information Communication Technology eases, support and framework are all recognized as factors of e-government readiness.

An additional research conducted by Ebrahim and Irani (2005), examines from a technological angle readiness of e-government. They developed some features that are critical for the advancement of e-government. To efficiently supply digital government services, a well-maintained infrastructure that supports information systems to assure performance, data transformation, and storage should be in place. The multiple regression model was employed for research analysis, and the outcome show that technological readiness significantly affects usage of the services of e-government.

Ahmed and Hussein did a study in 2006 that offered a framework design for E-

Government approval. They identified six factors that significantly determine e-government adoption, they maintained that before launching the e-government program there are certain important factors to be evaluated to guarantee proper execution in the right direction. The result from the research shows that technological factors are strongly linked to use of e-government. The research was carried out based on a Nigerian context while this study primarily focus on the Kenyan context.

An empirical study that Karunasena *et al*. (2011) conducted, evaluated readiness of e-government and its usage. The study revealed that financial and technological e-government readiness factors significantly contributed to government programs success. From the viewpoint of technological readiness, the study created an important positive effect of technology on utilisation of government digital services. Similarly, the key influential factors that affect e-government have been identified as ICT infrastructure and security. Also, another important technological factor is availability of new media that affects e-government readiness.

Alghamdi *et al*. in 2011 conducted a study and suggested a framework for checking the Information Communication. Organizational readiness for technology in developing regions. They recommended that the e-government framework include some scope of Information Communication Technology readiness evaluation for public sector organizations, such as: e-government program, human resources user access, business process, architecture, and information systems dimensions include: connectivity, hardware, security, software and operations. Results of the study signified that technological factors significantly affect the readiness of e-government services in the

public sector. However, the research was a cross country analysis; the ongoing research was based on Kenya, thus giving a country definite result.

Kumar, Mukerji, Butt, and Persaud (2012) conducted a research on Canada's adoption e-government successful factors. The study suggested that technological factors such I.T infrastructure and service quality improved successful e-government adoption. However, Kumar et al.'s study was limited to Canada. Because Kenya is a developing country, the findings of studies conducted in developed countries such as Canada cannot be extrapolated to Kenya .

2.3.2 Organizational Factors and Usage of E-government Services

Bakry (2004) conducted a research and recommended STOPE model with the aim of providing solid ground for advancement of a global framework close to e-government readiness. (Strategy, technology, organization, people and environment) are the five dimensions identified by the models. The findings of the research opined that organizational factors have a beneficial and meaningful impact on e-government usage.

In Kuwait, Zaied, Khairalla, & Al Rashid in 2007 examined the models of evaluation in terms of e-readiness to determine e-government readiness. (Connectivity, staff skill set and organizational infrastructure) were the three main variables they adopted. The findings of the research showed that organizational factors have remarkably influence on digital government services.

A research on how usage of digital government services is influenced by e- readiness was conducted. It established that e-government factors readiness which are economical and technical readiness are related to the effectiveness of some government programs. The research result indicates that organizational factors do have beneficial

and important impact on the utilization of e-government (Karunasena, 2011). The study however was focused on South Africa; this research was focused on Kenya.

In 2011, Alghamdi *et al*. conducted a research and suggested an e-government structure for evaluating the eagerness of ICT of public cooperation in the context of countries that are developing. The recommended e-government structure constitutes seven elements of readiness of ICT evaluation for government institutions which are: ICT architecture, e-government organizational ICT strategy, human resources, information systems and business process, access of user, e-government programme and ICT systems. The elements of ICT framework are: software, security, hardware, operations and connectivity. The results of the study indicated that organisational factors significantly impinge on the readiness of government agencies in public sector. However, the research was a cross country analysis; the current research was based on Kenya, thus providing a country specific result.

A research was done to analyze the following technological factors of e-government readiness: systems of exchanging data, information system, security, infrastructure of network infrastructure of ICT as well as (services quality, information and system). The analysis of the study was conducted using multiple regression model. The research outcome point out that organizational factors significantly affect adoption of e-government products (Kurdi and Randles , 2011).

In 2013, AISuwaidi & Rajan conducted an investigation on e-readiness and e-government services usage in India. Findings from the study established that IT

infrastructure, security and IT support are the important determinants of an e-government execution. The study's findings revealed that organizational characteristics substantially affect the adoption of e-government in India. The aforementioned study however, primarily focused on India. This study focused on Kenya, addressing contextual deficits.

2.3.3 Social Factors and Usage of E-government Services

STOPE model was utilized to research growth of a global structure associated with e-government readiness The five elements recognized by the model are (organization, strategy, people, technology, and environment). The results show that e-government usage is positively and significantly affected by social factors (Bakry, 2004). Ebrahim and Irani in 2005 conducted a further study to analyze readiness of digital government services from a perspective of technology. They developed five elements needed for the progress of digital government services. Utilizing multiple regression model for the research analysis, results indicated that social issues significantly affect usage of services of e-government.

Similarly, Ahmed and Hussein in 2006 conferred a structure model for E-Government acceptance. They identified six factors that significantly determine e-government adoption. The study indicated six important elements to be addressed before initiating the e-government plan to ensure it is implemented in the proper direction. The study result revealed a positive nexus between the variables. The study was focused on Nigeria; this research focused on Kenya.

In 2013, Aisuwaidi and Rajan did a study on e-readiness and use of e-government tools in India. It was established that ICT infrastructure, security, and technical support are the most important aspects of establishing digital government services. The study's findings from correlation analysis suggest that social factors have a substantial impact on e-government acceptability in India. The research was focused on India. This research was for Kenya as its focus, thereby filling the contextual gaps.

2.4 Conceptual Framework

This highlighted the proposed connection between the variables under research. E-readiness factors (technological, organizational and social factors) are the independent variables. Subsequently, E-government services usage was proposed to be the dependent variable.

Independent Variables

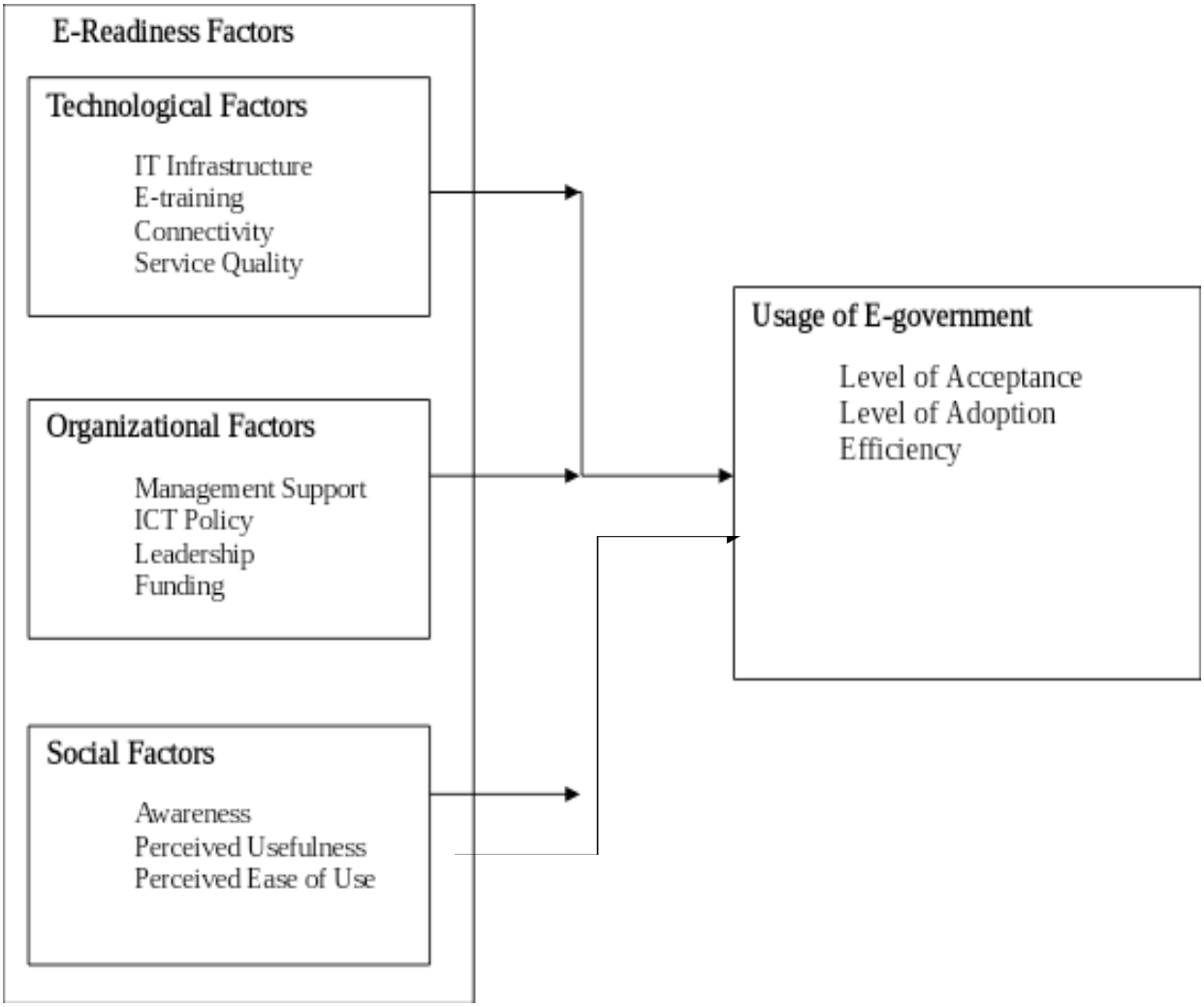

Figure 2.1 Conceptual Framework

Source: Researcher, (2023)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This segment delves into, and elaborates on the research methodology, target population, empirical model, research design, analysis, data gathering, and study procedure.

3.2 Research Design

This refers to the composition of the investigation and defines structures and organization of the study; it is regarded as a plausible cord that links and holds the main regions of the study in order to gain value. Kothari, 2010; Laurel, 2011. Descriptive design is divided into two types: cross-sectional and longitudinal. The cross-sectional design is suitable for research where data is obtained from a large sample group, and multiple variables are assessed over a specified period of time. On the other hand, longitudinal design is suitable for research where variables are assessed over a reasonable time span. As a result, a descriptive cross-sectional design was used in this research. Descriptive design is suitable when the objective is to explain features of a specific category and the assessment of variables taking place at a specified period; design aids explanation of way of life, beliefs, or ideas of a large number of people when asking questions about; who did what, what the person did, when it happened, where it happened, and how it happened (Burns & Bush, 2010) with many variables studied during a specific period of time.

3.3 Target Population

The population target were employees drawn from the 21 Kenyan government ministries (See Appendix 2). The personnel are scattered among various ministries of the Kenyan government.

3.4 Sampling Design

In sampling, a subset of a population data is gathered and findings are generalized to the complete population (Mugenda & Mugenda, 2011). Purposive sampling was used in the study. The researcher can use a purposeful sampling strategy to select a sample that will allow them to fulfill the objective of their study. Therefore, for this stud y sampled three respondents from each of the 21 ministries in Kenya were picked thereby making the sample size of 63 individuals at middle level management cadre.

3.5 Data Collection Procedures

For the purpose of obtaining essential statistics to achieve aforementioned objectives, the research used a questionnaire, which was delivered to a randomly selected sample of the population. The instrument employed structured questions. Close-ended questions are used as the instrument because they provide more precise and diverse responses to aid concrete recommendations and also to aid testing the evaluation of different traits, hence reducing the number of related responses. The researcher acquired a study authorisation correspondence from Kenyatta University's graduate school and then went to NACOSTI to get a research permit. The permission from each of the government ministries in Kenya was requested by the researcher where consent of the respondents obtained, they however had the right to agree or not agree. The

questionnaires were dropped and picked after they were filled.

3.6 Validity and Reliability of the Study

A preliminary study was conducted with fifteen randomly selected respondents from the target population. Similarly, each participant in the pilot study was eliminated from the final research sample size. A pilot study determined if the data collection instrument was valid and reliable.

3.6.1 Validity

The questionnaire's validity was determined by exposing it to content and construct validity tests. To ensure content validity, people who are proficient on the subject of management information systems were given the questionnaire to share their opinion and or proposition for the betterment of the questionnaire. At the same time, Construct validity was established by reevaluating both theoretical and empirical literature so as to have a better knowledge of the important idea and make sure that the instrument component are conceived out of literature. The supervisor of the research also examined the instruments in this research. The normal process during evaluation of content validity is to engage the service of someone proficient in a particular field (Mugenda, 2011)

3.6.2 Reliability

Reliability has to do with regularity of an observation, test, survey, or additional instrument of measurement. (Anastasiadou, 2006) The most important index of internal consistency is the index alpha which is ascribed as the correlations of the total variables; also their arrangement is independent. Reliability is heightened by assembling multiple

familiar items, by testing various samples of persons and by engaging unvarying procedures of test. It is normally adopted to determine the consistency and adequacy of the questions and scope that are used for an approach.

The current study focuses on employing Cronbach's alpha as a measure of internal consistency to evaluate the instrument's reliability for data collection purposes. The index alpha will compute each research variable documented in the questionnaire. Furthermore, the study demonstrated the overall dependability of the questionnaire. Field (2009) advocated for a minimum of 0.70 Cronbach's alpha value as satisfactory, which was the criterion employed in his study. The study determined that all variables had Cronbach's alpha greater than.07, indicating that the instrument was dependable for data collection.

Table 3.2. Reliability Test for this study

Variable	Crobach's- Alpha	No	Comment
Use of e-government services	0.713	5	Reliable
Technological factors	0.724	5	Reliable
Organizational factors	0.767	4	Reliable
Social factors	0.735	4	Reliable
Average coefficient	0.734	18	Reliable

Source: Survey Data, 2021

According to the illustration above (Table 3.1), it was revealed that the given the study variables had an alpha above 0.70. Therefore, based on the assertions by Polgar and Thomas in 2009, the study research instrument used posits reliability.

3.7 Data Analysis and Presentation

Subsequent to completion of data collection, it was categorised for processing. Data collected was proofread and thoroughly verified to eliminate errors, identify inconsistencies, and highlight any issues that arose as a result of the use of questionnaires. Rearranging and correcting enhanced code objectivity. Allocated codes allow the researcher to reduce defects and errors that occur during data collection and processing, as well as making interpretation of findings easier. After coding in accordance with the assigned codes, the data was diligently and accurately entered, and a comprehensive check of the data file was conducted to ensure its completeness, accuracy, consistency. The analysis of the data involved the utilization of both inferential and descriptive statistics.

In general, descriptive statistics offer descriptive attributes of the variables under study. The descriptive analysis was adopted (tables and charts) to explain central tendency measures and dispersion measures which include percentages deviation from standard mean and frequencies and mean score. The inferential analysis in addition made provision of statistics that was adopted to draw conclusions and assumptions regarding population of the research, thereby, giving answers to the study questions.

The use of multiple regression proved sufficient in determining the effect of e-readiness characteristics on E-government service usage in Kenya. The e-readiness factors included technological, organizational and social factors.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = Usage of e-government services

X_1 = Technological Factors

X_2 = Organizational Factors

X_3 = Social Factors

β_1 to β_3 = Regression Coeffcients

ε = Residual Term

3.8 Ethical Considerations

Research ethics entails the study adhering to the guidelines, principles and standard guiding a research. It was ensured that names of the respondents participating in the research are hidden thereby, upholding confidentiality. Furthermore, information obtained through the responses recoded in the questionnaire was coded so as to ensure confidentiality. insist that the researcher avoided the use of mortifying, offensive and unsuitable questions (Mugenda, 2011). In addition, relevant authorities were contacted to get approvals and permission to collect data.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1. Introduction

This section confers the empirical findings, accompanied by in-depth discussions. The conclusions drawn from the analysis of the data align closely with the stated objectives of the study.

4.2 Sample Characteristics

4.2.1 Response Rate

The response rate is the proportion of completed and returned questionnaires as a percentage of total questionnaires distributed to respondents. The response rate was presented graphically in Figure 4.1

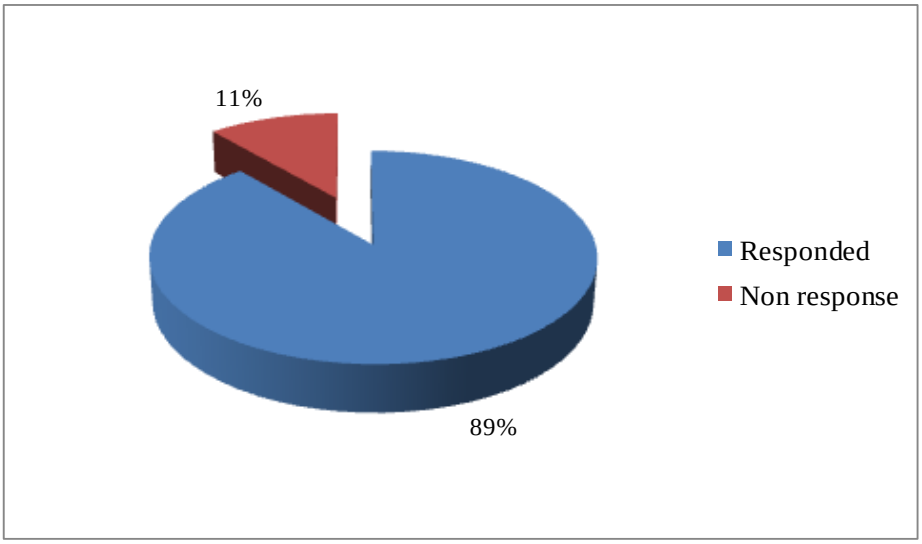

Figure 4.1: Response Rate

Source: Survey Data, 2019

According to the figures in Figure 4.1, 56 of the 63 questionnaires given received a complete answer, implying an 89 percent response rate. A 50 percent rate of response is sufficient; a 60 percent rate is considered to be good, while a 70 percent and above response rate is termed very good (Mugenda & Mugenda, 2013). In line with this assertion, the study rate of response termed very good for analysis.

4.2.2 Demographic Information

The section encompasses findings regarding the distribution of study participants in terms of gender, age and educational level. The study therefore adopted frequency distribution and percentages.

4.2.2.1. Gender of Respondents

The analysis examined the gender placement of the participants to assess their representation in the research sample. This designated section presents the respondents proportion based on both males and females.

Table 4.1 Gender Distribution

Variable	Category	Freq.	Percent
Gender	Male	31	55
	Female	25	45
	Total	56	100

Source: Survey Data, 2019

According to the illustration above (Table 4.1) it is evident that among fifty-six (56) responses received, thirty-one (31) were male, translating to 55%, and twenty-five (25) were female, translating to 45% hence, the male respondents constituted the predominant majority in the study.

4.2.2.2 Education Level

The section provides analysis based on the respondents educational levels which ranged from certificate to PhD level which is illustrated in Figure 4.2.

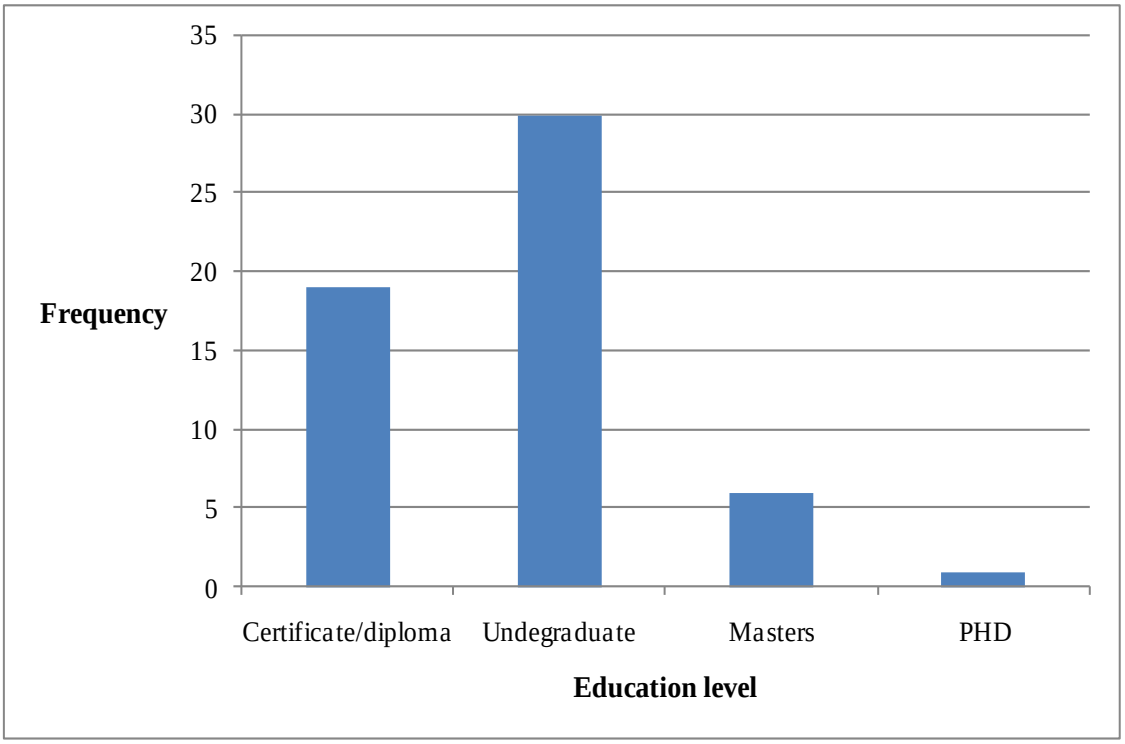

Figure 4.2 Educational Level

Source: Survey Data, 2019

The above illustration (Figure 4.2) depicted the findings about the educational level of study participants. Nineteen (19) respondents had a certificate/diploma, which corresponds to 34%, thirty (30) had an undergraduate degree, which translates to 54%, six (6) had a master's degree, which translates to 11%, and one (1) had a PhD, which amounts to 2%. Given that the majority of respondents held an undergraduate degree, they were primarily informed of difficulties pertaining to factors e-readiness to utilize e-governance services provided by the Kenyan government.

4.2.2.3. Age Brackets

The study also evaluated the distribution of study participants based on age. The age was grouped into classes including 25-34, 35-44, 45-50 and 51 years and above. The illustration below (Figure 4.3) depicts the age ranges of the respondents from this area.

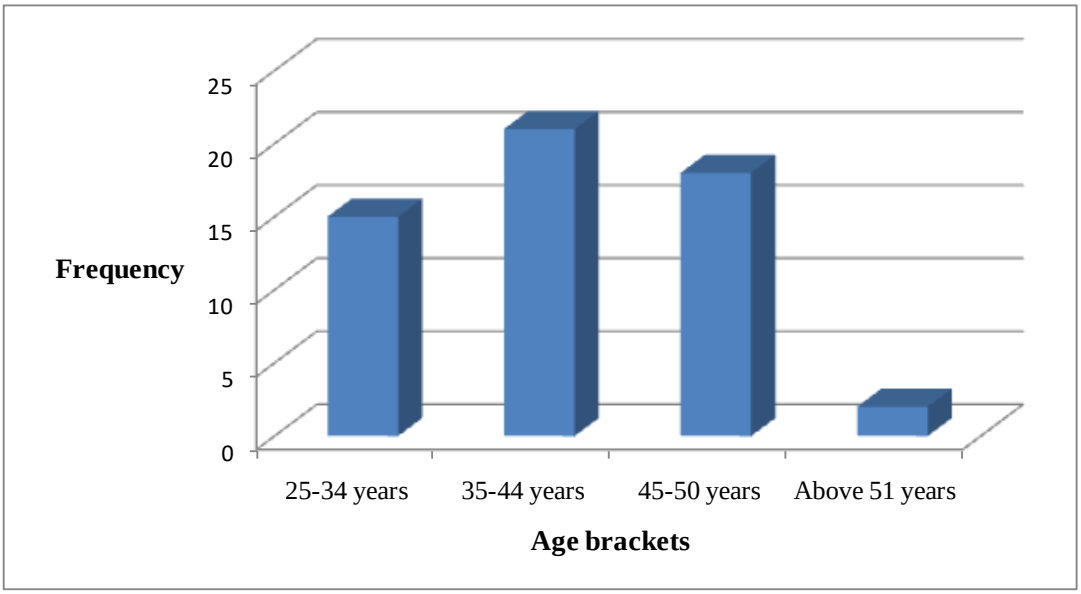

Figure 4.3 Age Bracket of Respondents

Source: Survey Data, 2019

According to the illustration above, the age group of 25 to 34 years had fifteen (15) respondents, while the age bracket of 35 to 44 years had twenty-one (21) respondents. The statistics further indicate that the age bracket 45-50 years had eighteen (18) respondents while that of above 51 years had a total of two (2) respondents. The statistics therefore are indication that the respondents were all adults. Majority of respondents were aged below 51 years hence were still youthful as regards adoption of technology hence could give data regarding factors of e-readiness and adoption of e-government services.

4.4. Descriptive Analysis of Study Variables

This outlines the descriptive findings about variables being studied such as technological, organizational and social factors. The section also presents the use e-government services.

4.4.1. Technological Factors

The study assessed the distribution of responses to statements about technical e-readiness criteria. The first pillar of e-readiness that was projected to influence acceptance of digital government services was technological considerations. The statements were evaluated by use of a 5-point Likert scale. A condensed form of the analysis is as illustrated in Table 4.2, which was based on data processed on technological factors.

Table 4.2: Technological Factors

Statement	N	Min	Max	Mean	SD
There is adequate IT Infrastructure in your institution	56	1.00	4.00	3.5179	.66033
Staff are trained on digital government services	56	2.00	5.00	3.5679	.68732
The e-government services are easily assessed	56	2.00	4.00	3.6214	.60624
There is high internet connectivity within the ministries' premises	56	2.00	5.00	4.1857	.73148
The quality of the services offered by e-government is improving	56	2.00	5.00	3.8857	.70619
Average scores	56			3.7557	0.6783

Source: Survey Data, 2021

Table 4.2 summarized the findings on numerous comments about technological determinants of e-readiness. According to the statistics, the majority of respondents believed that the ministries' IT infrastructure was inadequate, as substantiated by a mean answer score of 3.5179 and a standard deviation (SD) of 0.66033. Furthermore, respondents were mostly in agreement that staff is taught on e-government services, as substantiated by a mean answer score of 3.5679 and a standard deviation of 0.68732. Furthermore, the respondents overwhelmingly agreed that there was high internet connectivity within the ministries' premises, as substantiated by a mean of 4.1857 and a standard deviation of 0.73148.

In addition, the various responders relatively agreed e-government service quality are improving as indicated by 3.8857 mean and deviation from standard mean of 3.8857 correspondingly. The average scores for mean and deviation from standard mean were 3.7557 and 0.6783. The respondents therefore were largely in agreement in their responses to the various statements under technological factors.

Previous studies established a relationship between technology and use of electronic services. For instance Hazlett and Hill in 2003 examined ways to which e-government is been utilized in transmitting, promoting and enhancing business so as to ascertain real and possible difficulties encountered by government of UK and realized that problems of hardware, software and Information Communication Technology infrastructure as the three leading technological readiness factors that influenced e-government services delivery. Similar outcome were found by Kumar, Mukerji, Butt, and Persaud in 2012 who conducted a research on successful factors for e-government adoption in Canada.

4.4.2. Organizational Factors

The study also aimed to assess the distribution of responses to statements about organizational e-readiness variables. The second element of e-readiness that was projected to influence uptake of e-government services was organizational factors. Table 4.3 contains the analysis based on the research data obtained on organizational factors.

Table 4.3: Organizational Factors.

Statement	N	Min	Max	Mean	SD
There is top management support for the full e-government services utilization	56	2.00	4.00	3.3571	.69879
ICT policies are in line with the objectives and goals of e-government.	56	2.00	4.00	3.6786	.57547
There's adequate funding for usage of e-government in your institution	56	2.00	4.00	3.9750	.64842
There is access to ICT experts in the ministries	56	2.00	5.00	3.5714	.65663
The computer labs of your institution are well equipped	56	2.00	4.00	3.4821	.68732
Average scores	56			3.6129	0.6533

Source: Survey Data, 2021

The latter table 4.2 presented findings on responses to statements about organizational e-readiness criteria. The respondents in Kenya agreed on top management support, with a mean response score and standard deviation of 3.3571 and 0.69879, respectively. In addition, ICT policies are in line with e-government goals and objectives was relatively agreed by the respondents' which has a mean of 3.6786 and SD of 0.57547. Furthermore, they largely affirmed that there was inadequate funding for the usage of e-government with a mean documented as 3.975 and SD of 0.64842. The statement that there is access to ICT experts in the ministries reflected a mean response score and SD of 3.5714 and 0.65663 respectively. Finally, respondents were mostly unconcerned with the statement that computer laboratories in ministries are well-equipped.

Past studies by Zaied, Khairalla, & Al Rashid in 2007 examined e-readiness evaluation models to appraise the readiness of Kuwait e-government. It established that factors of e-government readiness which are economical and technical readiness are related to the effectiveness of some government programs. Kurdi and Randles did a study in 2011 to ascertain the technological components of e-government preparedness, the study identified that organizational variables are crucial for successful implementation of e-services in government.

4.4.3. Social factors

In an attempt to gauge the distribution of responses to statements about social factors of e-readiness, a study was carried out. The final element of e-readiness that was projected to influence uptake of digital government services was social considerations. The analyses are based on the processed data on social factors shown in the table below (4.4).

Table 4.4: Social Factors

Statement	N	Min	Max	Mean	SD
Level of computer literacy among users of digital government services influences Utilisation of the same.	56	2.00	4.00	3.4464	.56952
Perceived helpfulness influences employment of government digital services.	56	2.00	5.00	3.4821	.68732
Perceived ease of use influences adoption of digital government services	56	2.00	5.00	3.5179	.68732
Users attitude influences usage of e-government services	56	2.00	4.00	3.2679	.58748
Average scores	56			3.4286	0.6329

Source: Survey Data, 2021

The assertion that level of computer literacy among e-government users influences adoption of the aforementioned services got a mean answer score of 3.4464 with a standard deviation of 0.56952 in Table 4.4. The assertion that perceived convenience influences adoption of e-government services scored a mean of 3.4821 with a standard deviation of 0.68732, showing that the responses are congruent. The assertion that perceived ease of use influences e-services in government usage scored a mean and standard deviation of 3.5179 and 0.68732, respectively. Finally, the findings show that users' attitudes influence their use of e-government services, as evidenced by scoring a mean and standard deviation of 3.2679 and 0.58748, respectively.

According to Ahmed and Hussein's 2006 study, social variables lead to substantial influence on of e-government services usage. Another study conducted in 2013 by Aisuwaidi and Rajan on e-readiness and e-government usage tools across India found that ICT infrastructure, technical assistance, and security were the most important factors in deploying digital government services. Furthermore, the findings indicated that social variables had a substantial impact on India's e-government utilization.

4.4.4. Usage of e-government services

Finally, this research looked at distribution of responses on statements about using digital government services. The dependent variable was the use of e-government services. Table 4.5 depicts the results of the survey performed on the research data obtained on e-government service consumption.

Table 4.5: Descriptive Statistics on Usage of e-government services

Statements	N	Min	Max	Mean	SD
There is high acceptance level of digital government services in the ministry	56	2.00	4.00	3.5286	.59870
There is high level of digital government services adoption in the government ministry	56	2.00	5.00	3.5000	.71351
Use of e-government leads to greater efficiency	56	2.00	5.00	3.5929	.65167
Use of e-government is dependent on e-readiness factors	56	2.00	4.00	3.4393	.74533
Average scores	56			3.5152	0.6773

Source: Survey Data, 2021

Table 4.5 presents the results of responses to statements about the use of e-services in government.

Majority of respondents expressed a relatively high level of agreement regarding the acceptance of e-government services within the ministry, as evidenced by a mean response score and standard deviation of 3.5286 and 0.59870, respectively. The confirmation that e-government was widely used in the ministry received a 3.5000 mean response score and a standard deviation of 0.71351.

Furthermore, they as well apparently confirmed with the premise that using e-government services leads to improved efficiency, as evidenced by a 3.5929 mean and a standard deviation of 0.65167. Respondents agreed that e-government usage is heavily influenced by e-readiness criteria. The overall mean score for e-government service consumption was 3.5152, with a standard deviation of 0.6773. As a result, it suggested that respondents generally agreed with the statements included within.

Previous research has found that most governments in developing countries are adopting e-government services, albeit slowly (Nwabufo, Umoru, & Olukotun, 2012). Most African governments are in their initial stages of implementing e-government services, for instance Nigeria, Tanzania, Zambia, Uganda, Congo among others. Some African countries' embrace of e-services has resulted in increased production and efficiency, for instance Kenya, South Africa and Egypt. E-government also promotes international relations by facilitating greater communication between governments and enterprises (Mwangi, 2017).

4.5. Inferential Results

In an effort to draw inferences and make informed conclusions, the research adopted inferential statistical analysis. The inferential analyses adopted was multivariate ordinary least squares (OLS) regression and Karl Pearson correlation coefficients.

4.5.1. Correlation Test

This correlation analysis was based on bivariate Karl Pearson correlation coefficient. A correlation values lies between 0 and 1 where zero imply no correlation and 1 imply perfect correlation. A correlation coefficient between 0.1 and 0.3 is considered to be very weak. A correlation coefficient between 0.4 and 0.6 is considered to be moderate while a correlation coefficient between 0.7 and 0.9 is considered to be a very strong correlation. These correlation coefficient between variables, whether weak, moderate, strong or perfect can either be positive or negative. Positive correlation coefficient implies the concerned variables are directly associated while negative correlation means the variables are inversely related. The analytical results of the correlation test is illustrated in Table 4.6.

Table 4.6 Correlation Results

		Usage of e-government services	Technological factors	Organisational factors	Social factors
Usage of e-government services	Pearson Correlation	1			
	Sig. (2-tailed)				
Technological factors	Pearson Correlation	.459*	1		
	Sig. (2-tailed)	.000			
Orgnisational factors	Pearson Correlation	.461*	0.222	1	
	Sig. (2-tailed)	.000	.100		
Social factors	Pearson Correlation	.533*	-.043	-.075	1
	Sig. (2-tailed)	.000	.754	.583	

***. Correlation is significant at the 0.05 level (2-tailed).**

Source: Survey Data, 2021

The Karl Pearson correlation coefficients are shown in Table 4.6. The degree of the variable link was determined by correlation analysis, which depicted the magnitude of the relationship between e-readiness concerns and utilization of e-government. The outcomes revealed that the e-readiness considerations namely technological, organizational and social factors were directly and significantly correlated with usage of digital services by Kenyan government to provide services to its population. Following this, selection of e-readiness considerations adopted is therefore justified. Relationship between technological characteristics and e-government service consumption was direct and significant (r=.459, n =56, p =.000.05). Relationship noted between organizational variables and utilization of government digital service was direct and significant (r=.461, n=56, p=.000.05). Finally, the relationship between social characteristics and consumption of government's digital services was also direct and significant (r=.533, n=56, p=.000.05).

4.5.2. Model Summary

Table 4.7 provides a concise overview of the model, including the overall correlation coefficient (R), the coefficient of determination (R2) derived by squaring the overall correlation coefficient, and the coefficient of determination (R3).

Table 4.7 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.886[a]	.785	.746	.59479

a. Predictors: (Constant), Social factors, Technological factors, Organistional factors

Source: Survey Data, 2021

The correlation coefficient across all variables (R=886) in the table above, indicates a strong linear association between research variables. The model yielded an adjusted R2 of 0.746, implying that 74.6% of differences in e-government service consumption were ascribed to e-readiness considerations, specifically technological factors, organizational factors, and social variables. The findings are consistent with those of earlier reseachers which indicated that technological, social, and organizational variables have an impact on assimilation of digital services of the government (Karunsena and Alghamidi, 2011). It also revealed that 25.4 percent of changes in the use of digital government services were ascribed to non-study factors.

4.5.3. Analysis of Variance (ANOVA)

Table 4.8 highlights the overall effect of e-readiness parameters on e-government service adoption in the Kenyan government. A p-value less than 0.05 is a clear evidence that the explanatory variables under examination have a significant effect.

Table 4.8 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.604	3	3.201	9.049	.000[b]
	Residual	18.396	52	.354		
	Total	28.000	55			

a. Dependent Variable: Usage of e-government services

b. Predictors: (Constant), Social factors, Technological factors, Organisational factors

Source: "Survey Data, 2021

According to Table 4.8, the model described consumption of e-government services that has a p-value of 0.000, was below 0.05 level of significance. The e-readiness elements, which included technological, organizational, and social factors, all showed a substantial effect on the assimilation and utilization of e-government services."

4.5.4. Multiple Regression Results

Table 4.9 Regression Coefficients

		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
Model		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	-2.766	1.226		-2.256	.028	-5.225	-.306
	X1	.651	.290	.299	2.250	.029	.070	1.233
	X2	.712	.295	.321	2.415	.019	.120	1.304
	X3	.428	.187	.259	2.295	.026	.054	.803

a. Dependent Variable: Usage of e-government services

Source: Survey Data, 2021

The interpretation of results is informed by the specific study objectives. The explicit objectives were to evaluate effect of technological, organizational and social factors on e-government usage platforms in the Public Sector of Kenya.

The initial aim was to establish the effects of technological elements on the utilization of automated services in Kenya. Table 4.9 shows that technology impacts directly and has a significant influence on e-government service consumption (1 = 0.651, p= 0.029 0.05). This therefore means that, the utilization of those services is affected directly and significantly by technological factors. An increase in the technology factor unit results in a 0.651 increase in the utilization of e-government services among the various ministries and departments. Therefore, increase in technology variables result in increased utilization of digital government services in Kenyan government ministries.

The assumption that I.T infrastructure, e-training, connection, and service quality were components of technological factors may be linked to the significant and favorable effect of technological factors on adopting e-government platforms in Kenya's Public Sector. As a result, improving these components in Kenya's public sector would translate into increased use of digital technologies in service delivery. The outcome of the impact of technological factors on the usage of e-government services in Kenya's public sector matched those of (Hazlett and Hill, 2003), (Ebrahim and Irani, 2005), (Ahmed and Hussein, 2006), (Karunsena et al., 2011), (Alghamidi et al., 2011), and (Kumar, Mukerji, Butt, and Persaud, 2012).

Hazlett and Hill (2003) found that technological factors significantly affected adoption of e-services for business in the UK. Similarly, Ebrahim and Irani (2005) reported that technological readiness significantly affected usage of the services of e-government. Ahmed and Hussein (2006) similarly found that technological factors affect the adoption Nigeria's e-government.

Karunasena et al. assessed the readiness of e-government and utilization of government's digital services in 2011. According to their findings, technological considerations had a substantial impact on e-government readiness. Based on a cross-country investigation, it was found that technical considerations had a substantial impact on the readiness of government agencies in the public sector (Alghamidi et al., 2011). The same research was performed to study on the elements that attribute to the successful adoption of e-government services in Canada (Kumar, 2012). It was stated that technological elements such as information technology infrastructure and service quality influenced the success of e-government adoption.

The second objective evaluated the link between organizational factors the assimilation and utilization of automated organization processes in Kenyan government ministries. The findings in Table 4.9 indicated that the causal effect link between organizational factors and adoption of e-government services was direct and major (β_2= 0.712, p = 0.019< .05). Therefore, utilization of electronic services in Kenya's ministries and departments was directly influenced by organizational factors. When there is organizational factors rise of one unit, organizational factors lead to a 0.712 rise in usage of e-government platforms in Kenya's Public Sector. Increasing levels of organizational factors resulted to improved utilization of digital government services by the Kenyan government in providing services to the population.

Organizational variables and e-government utilization findings Kenya's public sector was consistent with empirical findings by Kurdi and Randles in 2011 and Aisuwaidi and Rajan in 2013 that revealed organizational characteristics had a substantial direct impact on the uptake and utilization of on digital government services.

Furthermore, a study revealed that organizational characteristics positively and significantly influenced the uptake and utilization of government digital services (Bakry and Zaied, 2007). They investigated e-readiness evaluation methodologies to identify Kuwait e-government readiness. The results indicated a significant influence of organizational characteristics on the assimilation and utilization of e-government services. Further study uncovered the fact that organizational characteristics exert remarkable impact on the uptake of digital technology services (Karunasena et al., 2011).

Furthermore, research was conducted that laid down a proposal of an e-government framework designed to evaluate the ICT preparedness of public cooperation in LDCs. Based on its findings, the preparedness of government agencies in the public sector is largely influenced by organizational characteristics (Alghamdi et al., 2011). Organizational variables to a great extent, impact the employment and use of government digital services (Kurdi and Randles, 2011). An investigation on the preparedness of utilization of digital services in India discovered that organizational characteristics had a substantial effect on the assimilation and utilization of the same (Aisuwaidi and Rajan, 2013).

The third goal was to examine the effects of social factors on the utilization of e-government services in Kenya's public sector. Table 4.9 shows that social characteristics directly and significally impacted the use of e-government services in GoK ministries (3= 0.428, p= 0.026.05). This finding implies that social variables influence the use of e-government tools in Kenyan government ministries. Consequently, enhancements in social variables lead to a higher adoption rate of e-government services within the public sector of Kenya. A unit rise in social variables results in a 0.428 increase in the use of e-government services.

The outcomes of this research revealed a direct and significant effect attributed to social factor components. The greater the awareness, perceived use, and utility of employing e-government technologies in Kenya's public sector, the more extensive the utilization of government’s digital services. The findings were consistent with earlier empirical research on social dynamics and e-government usage in Kenya's public sector.

It was discovered that social variables had a strong favorable effect on e-government utilization (Bakry, 2004). Similarly, a research on the same indicated that social variables had a considerable impact (Irani, 2006). Social variables substantially affects e-government acceptability (Ahmed and Hussein, 2006). In India, a study revealed that Social variables exert a remarkable influence on the adoption of digital technologies in government's service delivery (AISuwaidi and Rajan, 2013).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section includes the summary, its conclusion, and study suggestions. These are influenced by the research aims and as a result, the study outcomes.

5.2 Summary of the Study

With the introduction of e-government solutions, governments have realized the need of assuring the availability, affordability, dependability, and efficiency of their services. The use of electronic procurement systems promoted openness in the accountability of public expenditures. The impact of e-readiness concerns on e-government service usage in the government of Kenya ministries was investigated.

In specific words, the impact of technological, organizational, and social factors on the use of e-government services in Kenya's public sector was investigated. The study relied on primary data gathered through questionnaires, with an 89 percent rate of response. The analysis of the data was done using correlation, regression and descriptive approaches.

5.2.1 Effect of technological factors on the usage of e-government services

There was direct and notable relationship between technological characteristics and e-government service consumption with the following values: r=.459, n =56 and p =.000.05. Furthermore, the study discovered that technological considerations had a direct and considerable impact on the use of e-government services in Kenya's public sector. This means that as citizens and governments embrace technology, the use of electronic services in Kenyan government's departments is increasing. This is also attributed to the rapid spread of technological infrastructure by private communication companies in an attempt to offer network coverage in the entire country. For instance, Safaricom telecommunication company.

5.2.2 Influence of organizational factors on the usage of e-government services

The relationship between organizational variables and e-government service utilization was direct and significant (r=.461, n=56, p=.000.05). Furthermore, organizational considerations had a direct and considerable impact on the use of electronic government services in Kenya's public sector. Adequately funded Institutions with well-organized management support, fully functional ICT policies and good leadership are more likely to effectively use e-government services and encourage all personnel to embrace the same. This means that a closer examination of organizational issues and their successful management is likely to significantly increase the usage of digital government services in the public sector.

5.2.3 Relationship between social factors and the usage of e-government services

Finally, there was a direct and remarkable interrelation in social characteristics and e-government service consumption (r=.533, n=56, p=.000.05). Furthermore, the findings stipulated that social factors had a direct and significant impact on Kenya's use of e-government services in the public sector. This means that a greater emphasis on social variables, to include public awareness among others, is more likely to result in increased acceptance of government services within the Kenyan public sector.

5.3 Conclusion

The study's deduction is based on the research questions and objectives. According to the uncovering of the inquiry, e-readiness concerns are significant in determining the use of e-government services in Kenya's public sector. Specifically, on the effect of technological factors on the use of electronic government service in Kenya’s public sector, the study concluded that technological factors are significant in predicting the utilisation of digital government tools in the GoK ministries. As a result, enhanced technological aspects boost the use of e-government technologies in Kenya's public sector.

The study revealed that organizational characteristics have a crucial role in anticipating the adoption of digital government services in GoK ministries. The more management support, stronger ICT policies, good leadership, and financing there is, the more e-government services are used in Kenya's public sector. Finally, the study indicated that social factors are a crucial driver of the adoption of electronic government services.

5.4 Recommendations

The technological factors majorly affected the usage of e-government services. The study suggests that the government should set up adequate IT infrastructure in the ministries, as well as ensure that staff are well trained, strong connectivity, and service quality, as these will enhance the use of digital technologies in offering government services in the Public Sector of Kenya for the purpose of serving citizens in a more effective and efficient manner.

The study also found that organizational factors influence the use of digital government services in Kenya's public sector. Those in charge of ministries in Kenya should ensure that they support their ministries' e-readiness, develop and implement strong ICT policies, provide good leadership, and ensure financing to increase the use of digital government products offered by GoK ministries.

Finally, the study revealed that social factors are important in determining the extent of electronic government services in Kenya's public sector. Staff in Kenya's numerous ministries, as well as people, should therefore understand the importance of e-readiness and reap the benefits. As a result, they will grasp the need of maintaining a positive attitude and being responsive to e-government and its use in the future.

5.5 Suggestions for Further Research

The study established that adjusted R^2 was 0.746 which implied that 74.6 percent of the variations of usage of e-government services were attributed to e-readiness considerations namely technological factors, organizational factors and social factors. It also implied that residual fluctuations in e-government service utilization were attributed to unseen factors. Further research should be conducted to assess other factors influencing the adoption of digital government services in Kenyan government ministries.

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APPENDICES

Appendix 1: Questionnaire

This formulated questionnaire is meant for collection of information on the influence of e-readiness factors on usage of e-government services in the public sector of Kenya. Received responses shall be utilized for scholarly use hence confidentiality will be guaranteed. You are requested to ensure truthfulness and objectivity in all the responses. “Your involvement is greatly appreciated. Please avoid bias in your response.

SECTION A: Demographic Information

1. What gender are you?

Male [ ]

Female [ ]

2. What is your highest education level?

Certificate/Diploma [ ]

Undergraduate degree [ ]

Masters [ ]

PhD [ ]

3. What is your age bracket?

25-34 [ ]

35-44 [ ]

45-50 [ ]

Above 51

SECTION B

In this section, the influence of e-readiness factors is the main concern. These factors include technological, organizational and social factors and their effect on usage of e-government in the Public Sector of Kenya. (Tick the appropriate one: Strongly agree=5, Agree=4 Neutral =3, Disagree=2 and strongly Disagree=1)

TECHNOLOGICAL FACTORS"

5	4	3	2	1	**Statement for technological factors**	No
					There is adequate IT infrastructure in your institution	1
					Staff are trained on e-government services	2
					The e-government services are easily assessed	3
					There is high internet connectivity within the premises of the ministries	4
					The quality of the e-government services is improving	5

ORGANIZATIOTIONAL FACTORS

5	4	3	2	1	**Statement for organizational factors**	No
					The top management supports the full usage of e-government services	1
					ICT policies are in harmony with the goals and objectives of e-government.	2
					There is adequate funding for usage of e-government in your institution	3
					There is access to ICT experts in the ministries	4
					The computer labs of your institution are well equipped	5

SOCIAL FACTORS

5	4	3	2	1	**Statement for social factors**	No
					Level of computer literacy among users influences usage of e-government services	1
					The perceived usage and usefulness of e-government services.	2
					Perceived easiness to use influences on usage of e-government services	3
					The attitude of users influences usage of e-government services	4

USAGE OF E-GOVERNMENT SERVICES

5	4	3	2	1	**Statement for usage of e-government services**	No
					The level of acceptance of e-government services in the ministry is high	1
					There is high level of e-government adopting in the ministry	2
					Utilisation of e-government service leads to greater efficiency	3
					Utilisation of e-government service is dependent on e-readiness factors	4

Thank you

Appendix 2: TARGET POPULATION AND SAMPLE DISTRIBUTION

MINISTRY	**POPULATION SIZE**	**SAMPLE SIZE**
Interior and National Administration	15	3
Defence	11	3
National Treasury and Economic Planning	12	3
Foreign and Diaspora Affairs	13	3
Public Service, Gender and Affirmative Action	10	3
Roads and Transport	9	3
Lands, Public Works, Housing and Urban Development	17	3
Information, Communication and the Digital Economy	24	3
Health	11	3
Education	9	3
Agriculture and Livestock Development	9	3
Investments, Trade and Industry	11	3
Ministry of Co-operatives and Micro, Small and Medium Enterprises Development	10	3
Youth Affairs, Sports and the Arts	11	3
Environment and Forestry	10	3

Tourism, Wildlife and Heritage	11	3
Water, Sanitation and Irrigation	9	3
Energy and Petroleum	10	3
Labour and Social Protection	9	3
EAC, ASALs and Regional Development	10	3
Mining, Blue Economy and Maritime Affairs	11	3
TOTAL	**251**	**63**

Appendix 3: Research Authorization from Kenyatta University

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: D53/OL/CTY/37835/2016

DATE: 29th May, 2019

Director General,
National Commission for Science, Technology
and Innovation
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR PURITY MBULWA KILINDA– REG. NO. D53/OL/CTY/37835/2016.

I write to introduce Purity Mbulwa Kilinda who is a Postgraduate Student of this University. The student is registered for M.B.A degree programme in the Department of Management Science.

Purity intends to conduct research for a M.B.A Project Proposal entitled, "E-readiness considerations and usage of E-government services in the public sector of Kenya".

Any assistance given will be highly appreciated.

Yours faithfully,

PROF. ELISHIBA KIMANI
AG.DEAN, GRADUATE SCHOOL

EM/ik

Appendix 4: Research Authorization from NACOSTI

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **665576**

Date of Issue: **24/October/2019**

RESEARCH LICENSE

This is to Certify that Miss.. PURITY KILINDA of Kenyatta University, has been licensed to conduct research in Nairobi on the topic: E-READINESS CONSIDERATIONS AND USAGE OF E-GOVERNMENT SERVICES IN THE PUBLIC SECTOR OF KENYA for the period ending : 24/October/2020.

License No: **NACOSTI/P/19/2275**

665576

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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