ADOPTION OF E-GOVERNANCEIN THE PUBLIC SECTOR: A CASE OF NAIROBI CITY COUNTY

BY:

MULUBI ASILIGWA

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DECLARATION

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

Signature

_____ Date _____

Mulubi Asiligwa
C153/OL/CTY/24407/2014

I confirm that the work reported in this researchproject was carried out by the candidate under our supervision.

Signature

_____ Date_____

Dr. Maina Elizaphan Muuro, PhD.

Department of Public Policy & Administration
Kenyatta University

DECLARATION

I would like to dedicate this research project to my dear family and friends for encouraging me throughout my studies and in writing this research project.

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ABSTRACT

Adoption of e-governance in delivery of services is one of the ways in which public sector organizations can enhance efficiency and effectiveness in delivery of services. The establishment of devolved system of governance created 47 semi-autonomous County Governments mandated to provide governance services within their region. Studies have been conducted on adoption of e-governance in the devolved government structure, however, most of studies did not utilize the UTAUT model or moderating variables to determine e-governance adoption. Therefore, this study adopted the UTAUT model to examine performance expectance, effort expectancy, social influence, and facilitating condition in adoption of e-governance. The study used gender and job experience as moderating variables. The descriptive survey research design was. The study had a target population of 12, 946, and a sample size of 384. A questionnaire tool with questions adopted from UTAUT variables (performance expectance, effort expectancy, social influence, and facilitating conditions) was used. The study findings were analyzed for descriptive and inferential statistics. Inferential statistics were used to test the hypothesis of the study. The findings revealed the existence of a statistically significant relationship between performance expectancy, effort expectancy, social influence, and facilitating conditions. However, the moderating variables (gender and job experience) did not have significant relationship with adoption of e-governance. The study concludes that facilitating conditions had the strongest relationship with adoption of e-governance. The study recommends that other studies e-governance should test adoption using other models and other than UTAUT, and more moderating variables other than gender and job experience as since they have been utilized in this study.

DEFINITION OF OPERATION TERMS

The following are definition of terms used in this study:

E- Governance

E-governance is used in this study tomenthe utilization of information technology platforms, or by electronic means by the public sector to provide or render services to the general public.

Efficiency

This study defines efficiency as stated to mean the manner in which inputs produces designed outcomes within specified time, cost, quality and quantity.

Accountability

This study defines accountabilityas a broad doctrine of openness that government business and transactions should be predictable and should operate according to set out laws rather that arbitrarily, where public servants adjudicating governance duties and responsibilities are held to account for those responsibilities.

Information Communication Technology (ICT)

Information Communication Technology (ICT) in this study means the utilization of internet, Wide Area Networks, local area networks, computers, mobile phones and other online platforms to advance communication, delivery of businesses, and services to the citizen

Performance Expectancy

Performance expectancy will be used in this study to mean the expectations users of e-governance hope to achieve in enhanced service delivery compared to traditional way of acquiring or seeking services from the government

Effort Expectancy

Effort expectancy is used to refer to the ease with which users expect to find utilization of e-government services to be compared to traditional ways of queueing for services.

Social Influence

Social influence is used to refer to how people interact in the society and at work, and how this interaction informs and influence how they accept certain behaviors, attitudes, or changes to the existing status quo.

Facilitating Conditions

Facilitating conditions are used to refer to the policies, processes, systems, structures that need to be in place to enhance adoption of e-governance in the public sector.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Globally, the adoption of information communication technologies (ICT) has brought a lot of transformation in business, governance, and communication (Monga, 2008). ICT innovations have brought significant changesin the way private companies function and operate; the way public function and operate, and the way government institutions provide services to citizens (Simenda, 2009). In modernized world like Europe and America, e-governance were adopted in the late 20th to early 21st century, making governance and service delivery efficient and effective (Monga, 2008). However, in comparison to developing world like Africa, government service delivery can be a nightmare. Mostly, government departments and service delivery has been characterized by paper work, long queues, bureaucracy, cramped spaces and citizens'frustrations (Simenda, 2009).

In the 21st century, the growing demand foraccountability and efficient governance and provision of services have put under pressure on governments and public sector to deliver not only quality, but efficient and effective services (Maranga, 2012). Africa in particular, governments are trying to tackle the demand for efficient governance by re-engineering the processes of how government services are delivered to people. In this regard, ICT has played, and is still playing a major role in developing and delivering services to citizens using online platforms that are faster and efficient. Simenda (2009) argues that if e-governance is properly utilized, it has the potential to enhance channels of service delivery, robustness of government and citizens' communications, and timeliness of service delivery. Equally, the adoption of e-governance is able to address social problems,

and strengthen democratic institutions. However, for African States to gain the benefits of e-governance, technology and its infrastructure must be implemented and utilized effectively. The utilization of information technology in fostering delivery of service has potential to transform governance and government institutions (Monga, 2008).

Globally, there has been a paradigm shift from traditional way of offering government services; that is, moving away from situations where citizens have to physically visit government offices and queuing for services, to e-governance where government services are offered through ICT platforms. Governments and independent policy makers have realized the importance of adopting ICT platforms as a way to enhance responsive and effective governance (Maranga, 2012). Traditionally, governments utilize paper-and-file approaches in managing services delivery to the citizens, however, the paper-and-file approaches have been majorly ineffective in so far as accountability is concerned (Mehrtens et al., 2001).

In the current modern dispensation, governments' interactions with private citizens,and businesses demands collaborative and participatory engagement, where the private sector enhances government efficiencies by providing new technologies that enhance the way service delivery is done (Stiftung, 2002).

In a study conducted by Barua (2012) in India on the adoption of e governance revealed that the public sector benefits immensely when government services are placed online for citizens to access. The study examined the factors that led to the adoption of e-governance in India. Of particular interest was how automation of business registration and business permits enhanced delivery of services to the Indian people. In another study that was conducted in Singapore by Papadomichelaki and Mentzas (2012) examined whether e-government services that were introduced in Singapore did enhance quality,

efficiency and effective delivery of service compared to traditional service delivery. The study established the existence of significant relationship between quality of service, efficiency, and effective delivery of service, and adoption of e-government services.

In another study by Matavire, Chigona, Roode, Sewchurran, Zane Mukudu, and Boamah-Abu, (2010) on challenges of e-governance project implementation in South Africa revealed that facilitation conditions are essential in establishing and enhancing e-governance. The study zeroed on how ICT infrastructure are essential in laying a foundation upon which e-government platforms are carried out. However, the study did not look at adoption of e-governance in public sector institutions.

In the Kenyan context, several studies have been done one-governance. For instance, a study by Kandiri and Onyango (2007) focused on ingredient to the successful implementation of the government funded secondary education implementation; Gakiria (2009) on the other hand examined ICT platforms for e-governance, where he found a strong relationship between investment in ICT platforms, and adoption of e-governance. Mugambi (2013) on the other hand, conducted a study on the effects of e-government strategy on service delivery however, he did not utilize any model to test for existence of relationships, or to accept or fail to accept relationship hypothesis. Equally, Muraya (2015) focused on factors effecting successful adoption of e-governance in the public sector however, his focus was on e-governance from a centralized government perspective, and not from a county government perspective.

In 2010, Kenya promulgated a new constitution and officially stated a devolved system of government with 47 County government being semi-autonomous. The governments have the mandate to provide health services, agricultural services, business registration

services, education services, water services, limited taxation, and collection of rates (World Bank, 2014).

Nairobi County that forms this study is one of the 47 county governments. It hosts Kenya's political, commercial and industrial capital. The county population as per the 2009 population census was 3,138,369 (1,605,230 males and 1,533,139 females). By the 2012, population is projected to be 3,517,334 people with an average density of 5060 persons per km2. By the end of 2017, the population density is set to rise to 6119 persons per km2. The high rate of urbanization is a major contributing factor to the high population growth rate. This will put a lot of pressure on the on provision of governance services in the County. As a result, the County government has embarked on e-governance mechanisms to enhance service delivery to the residents of Nairobi. Some of this mechanisms include robust Nairobi county website where business licenses can be applied online; e-procurement, where tenders are floated and procurement done; and e-payment systems where the county government receives payment using online ICT platforms.

The County has also developed an e-governance sector in charge of automation of all County services in order to provide enhanced operational efficiency and effectiveness in service delivery; Design and development of an interactive website through which information for public consumption can be uploaded thus provide a communication channel for exchange of views and opinions; Dissemination of County Integrated Development Plan through ICT platforms; Dissemination of public information and Public participation through online content, and finally Development of county communications capacity and infrastructure that will enhance residents and Nairobi county government interactions.

1.2 Statement of the Problem

Various studies have been conducted on adoption of e-governance in different public sector organizations (Venkatesh et al., 2003; Bhuiyan, 2009; Colesca, 2009; Matavire et al., 2010; & Davis, 2013). Most of this authors examined adoption of e-governance using Technology Acceptance Model (TAM), others used UTAUT Model to determine role of e-governance in development, and solutions to minimize e-government risks. Studies have also been done in the Kenyan context to determine adoption of e-governance in the public sector (Kandiri & Onyango, 2007; Gakiria, 2009; Mumbi, 2013; & Muraya, 2015). However, most of this studies did not examine adoption of e-governance for devolved County governments context. Additionally, these studies did not utilize the widely accepted Unified Theory of Acceptance andUse of Technology (UTAUT) model, and moderating variables in examining adoption of e-governance in the public sectors. Therefore, this study seeks to expand the body of knowledge by providing findings on adoption of e-governance in the county government context in Kenya using the UTAUT model. By using the UTAUT model, it is possible to test performance expectancy, effort expectancy, social expectancy, and facilitating conditions in addition to gender and job experience as moderating variables on adoption of e-governance. Nairobi City County was selected because it has adequate level of ICT integration in provision of government services, and has adequate skilled ICT personnel working for the County.

1.3 Research Objectives

1. To determine the extent to which performance expectancy influences adoption of e-governance
2. To determine the extent to which effort expectancy influences adoption of e-governance
3. To determine the extent to which social influence affects the adoption of e-governance

4. To determine the extent to which facilitating conditions influence the adoption of e-governance
5. To test hypothesis on adoption of e-governance in the public sector

1.4 Research Hypothesis

This study was guided by the following research hypothesis:

H1: Performance expectancy will have a positive influence on adoption of e-governance

H2: Effort expectancy will have a positive influence on adoption of e-governance

H3: Social Influence will have a positive influence on adoption of e-governance

H4: Facilitating conditions will have a positive influence on adoption of e-governance

1.5 Significance of the Study

This study fills the existing gap in literature on the adoption of e-governance in public sector. Equally, this study has adopted the UTAUT model that has not been used in previous studies conducted on adoption of e-governance in the public sector. As such, the findings of this study will not only enrich the existing body of literature, but also the following stakeholders:

Nairobi County Government

The County government of Nairobi will be able to utilize this study to influence of adoption of e-government. This will include findings on how the County government can enhance the adoption of e-governance.

Researchers and Academicians

Knowledge that will be generated from this study will be used by academicians and researchers to further confirm study findings, test hypothesis, or develop further synthesis on the findings. As a result, the body of knowledge on e-governance will continue to expand.

Residence of Nairobi County

This study can also be utilized by residence of Nairobi County in understanding the adoption of e-governance, residence is able to better utilize the e-governance platforms better in engaging the county government for governance services.

E-governance Experts

E-governance experts will also be able to glean from the findings of this study on to improve the development of policy that is specific and unique to Nairobi County government. This will improve policy formulation on County, sub county and ward levels of governance.

1.6 Scope of the Study

The focus of this study was to establish the adoption of e-governance in Nairobi County. The study was restricted to UTAUT model variables which included performance expectancy, effort expectancy, social influence, facilitating factors and e-governance, in addition to gender and job experience as moderating variables. The study focused on employees of Nairobi county, and users of e-government services in Nairobi Central Business District (CBD). The study took place in the month in the August 2016.

1.7 Delimitation and Limitation of the Study

The study took placeNairobi County through systematic review of primary and secondary data, therefore findings are limited to Nairobi County. The study was delimited toe-policies, procedures, and processes necessary for adoption of e-governance.

CHAPTER TWO: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter highlight literature review based on theoretical and empirical studies that have been done by other scholars on the adoption of e-governance. Literature on e-governance is presented first, followed by literature on UTAUT model variables; performance expectancy, effort expectancy, social influence, and finally literature on facilitating conditions is discussed last.

2.2 E-Governance

The World Bank (2014) defines e-governance as the utilization of information technologies (such as Wide Area Networks, the Internet, and mobile computing) by government agencies in order to transform relationships with citizens, and delivery of businesses, services and other forms of governance to the public. E-governance is defined as the means through which rendering of government services and information to the public is done using electronic means (Nkwe, 2011); or e-governance as mechanisms through which ICT is utilized to deliver government services to the people (Monga, 2008). Information technologies in governance can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management resulting in greater transparency, and accountability (World Bank, 2014).

2.3 Adoption of E-Governance

The scope of e-governance covers Government to Citizen (G2C); Citizen to Government (C2G); Government to Government (G2G) and Government to Business (G2B). Government to Citizens (G2C) or Government to Customers is the way in which government utilizes online platforms to offer services to the citizens (Sharifi &Zarei, 2004); and consumers who are the private individuals (Sarpoulaki, Eslami, & Saleknia, 2008).The government ensures that public services and information are fully accessible to the citizens. The G2C model ensures that citizens find and utilize government services online. Some of these services include the public utility services (Electricity, Telecommunication, Education, Transportation, Post, Medical facilities) and also democratic services relating to the citizenship such as Registration, Certification, Licensing, Taxation, Passports, and Identification Cards. E-governance in G2C relationship will involve facilitation of the services flowing from Government towards Citizens with the use of ICT (World Bank, 2014,Nkwe, 2011; Yong & Koon, 2014).

2.3.1 Performance Expectancy and Adoption of E-Governance

Performance expectancy is one of the key components of e-governance under theUnified Theory of Acceptance and Use of Technology (UTAUT) model. Performance expectancy has three components namely efficiency, effectiveness, and quality (Venkatesh et al., 2003).The advent of Information communication technologies (ICT), has enhanced the way in which government delivers services to the public. Equally, the desire and need to deliver services in an efficient, timely and cost effective manner has significantly influenced the adoption of e-governance platforms (Monga, 2008). The need for a more efficient and public administration has necessitated the drive towards adoption of e-governance strategies. In public administration the delivery of service in government departments has been and continues to draw attention from the external and internal

environment. As a result, service delivery has been affected by various factors availability financial resources, training, ICT Skills, and organizational culture among other factors (Budhiraja, 2005). For a government to be deemed efficient, it must be in a position where it is utilizing available resources without any wastage, and still achieve its objectives. Some of the ways in which e-governance can enhance efficiency in delivery of services include enhancing IT platforms for delivering financial services, licensing services, and registration services among others.

In most organizations, efficient production and delivery of products and services are essentialto operational costs management (Gupta, 2003). In the public sector, delivery of financial services in a timely manner is very essential since it forms the basis upon which the government and governance is measured.Government programs require financial allocations from the treasury to necessitate implementation of government programs and projects availability of financial resources significantly contributes towards delivery of efficient services from government to the public (World Bank, 2014). However, sometimes bureaucracy in public sector institutions impedes the effectiveness of financial services. Traditionally, most public sector organizations were accustomed to using paper-and-file approaches in managing Public Administration of financial services. This paper and file approaches have largely been ineffective due to the amount of time required to process, sign approve, and track the paper trail (Mehrtens et al., 2011). In other instances, human resource required to create financial journals, carry out bank reconciliations and other financial functions as relates to financial disbursement to and from government agencies can be a costly affair.

According to Settles (2015), there exists a positive relationship between efficient delivery of services and e-governance. Further, Settles argue that e-government has enabled public

institutions to institute efficiency in the way payables and receivables are done within the public sector. Further, he argues that to enhance how government services are done, there is need to e-governance systems with e-payment modules for quick and easy payment transactions. Any individual or vendor seeking to make payments to the government just need to have web enabled platforms like a computer and internet to access government financial services in an efficient manner (Matavire et al., 2010). Banking, tax deposit payments, online e-government platforms are quicker and efficient compared to manual systems where a client would go queue at a government office for hours just to make payments (Bhuiyan, 2009; Nkwe, 2011; Yong & Koon, 2014). Literature on e-governance reveal the existence of a direct positive relationship between efficiency in financial systems and adoption of e-governance for both the users and those who administer e-governance services (Venkatesh et al., 2003; Colesca, 2009; Papadomichelaki & Mentzas, 2012; Settles, 2015)

Effectiveness is defined as the ability to achieve maximum results using minimum or requires resources (World Bank, 2014). In order for e-governance platforms to function effectively, specific ICT skills which include e-government strategy and Planning and development must be in synch. Effectiveness is also affected by, and influenced by e-government system development, e-government system implementation and maintenance, and e-government service and user Support (Bhuiyan, 2009). Without this components, it would be difficult for public institutions to execute their mandate with effectiveness and attain organizational objectives.

Effective delivery services in the public sector in the modernized world is contingent upon growth of ICT infrastructure and platforms that can enable government agencies to conduct their services with speed, effectively and on cost (Reijswoud, 2008). E-

government has enables the development decentralized government systems where citizens can access government services without having to travel. Effectiveness in e-governance therefore is to empower the citizenry to be able to access government services at minimal costs, while at the same time, allow public agencies to deliver this services at minimal costs. A study by Bhuiyan (2009) revealed the existence of a positive relationship between effectiveness of service delivery and adoption of e-governance services

Public sector institutions exist for the purpose of providing basic services that cannot be left to the private sector alone (Maranga, 2012). Public sector bureaucracy does not usually provide for space for innovativeness, and creativity that might lead to highly developed and quality work. Quality of service is mostlydefined based on service performance, customer's perspective, perceptions of service, and customer expectations. Equally, quality of service is defined as the difference between the expected service and the perceived service (Papadomichelaki & Mentzas, 2012).

The quality of e-government service is usually affected by two factors: thesystem quality and information quality. For an e-governance services to be registered as quality, the service has to be reliability, responsiveness, credible, and secure (Papadomichelaki & Mentzas, 2012). Quality of e-governance services is also affected by information quality within the organization (Davis (2013). If a public sector institution does not have internal and external mechanisms for capturing, analyzing and enhancing quality of information, service or product, then it cannot produce quality e-governance services.

The advent of e-government has enabled government or the public sector to develop mechanisms that enhances quality of work (Matavire et al., 2010). For instance, managers can constantly monitor quality of services by developing monitoring and evaluation

online frameworks that are essential to administration of e-governance. This includes management information systems that has the capabilities of generating crystal report in time for management decision making (Njuru, 2011). Another way to measure quality of work in e-governance is by providing for online feedback mechanisms from clients. This approach enables managers to be able adjust products and services to meet the standards and demands of clients.

The growth of internet has transformed how private individuals, businesses and governments transact. The expansion of ICT infrastructure and networks has enabled governments to equip its citizens'to participate in an inclusive governance process (Maranga, 2012). One of the measures of e-governance quality is the Self-Service Technology (SST), which refers to IT interface that enable clients to receive services without direct human contact with the service providers(Reijswoud, 2008). Self-Service technology (SST) also plays acritical role for e-government in that it helps deliver services to all citizens directly. In the modern era, e-government enables public sector agencies to communicate information in a faster and robust manner compared to traditional ways, where a client had to physically visit a government office.

E-governance platforms can also offer a host of transformation capabilities ranging from shrinking communications and costs, maximizing speed, broadening delivery to the public, and also helps in eradicating distance for service delivery(Reijswoud,2008). However, Bhuiyan (2009) argues that the full extent of e-government service quality and the associated benefits to users is still remains an open ended question. The ability for government agencies to develop internal ICT capabilities and skills necessary to work with, and communicate using ICT platforms is critical to enhancing efficient delivery of services. IT specialists within government agencies serve a critical role in managing ICT

platforms. Thus, for effective and efficient implementation of e-government solutions, government agencies must possess technical skills to plan, evaluate, manage online content and queries for governance services for the public (Settles, 2015).

2.3.2 Effort Expectancy and Adoption of E-Governance

For e-governance platforms to function effectively and deliver the efficiency they are sort for, e-governance has to be dynamic in terms of ease of use, skills required to deploy and run e-governance, and the risk the users are exposed to when engaging e-governance has to me extremely minimal. To effectively realize the benefits of e-governance, the content and technology deployed and the ICT infrastructure utilized must be easy to use, particularly for those using the system (Tomasz, Elsa & Irshad, 2007). Ease of use is defined by Papadomichelaki and Mentzas, (2012) as the understanding of online index, or contents and information that enables flawless communication between users and e-governance agencies in a manner that established meaning, understanding and coherency. Ease of use is an essential component that helps users determine whether a system meets the effort of expectancy.

A study conducted by Carter and Belanger (2012) indicated that 63% of respondents from government institution indicated that e-governance platforms needed to be simplified to enhance ease of use. Key areas for further e-governance simplifications included online payments and business registration processes and procedures. Similarly, 60% of respondents from rural communities indicated that they did not know how to use the internet making it difficult to access and utilize the e-governance services. The study concluded that for e-government services to be effective, government agencies need to simplify interface and e-governance modules, conduct more sensitization trainings while at the same time, enhance digital e-governance shops within communities.

According to World Bank (2014), e-governance can be made viable through expansion of e-governance infrastructure so as to enable people both in the urban and rural areas access government services. Secondly, e-governance requires simplifications and modifications that will necessitate easy access, and use by citizens to the government and governance processes. In Africa, for instance, lack of adequate e-governance networks and high levels of illiteracy exacerbate the difficulties of communications between citizens and government. About 70% of rural African population finds it difficult to access, and use e-governance services to the technical nature of information technology. Therefore, government agencies should endeavor to have web translators into local indigenous languages that rural communities can understand and comprehend (Tomasz, Elsa & Irshad, 2007). To this end, Carter and Belanger (2012) argue that there exists a significant relationship between ease of use, and adoption of e-governance services. As such, public sector institutions should endeavor to have information technology simplified to be usable, otherwise e-governance initiatives will remain the preserve of urban populations versed in information technology, and e-governance.

Citizen's preparedness to use e-governance means that they need to be equipped with IT skills that will enable them explore different attributes and components of e-governance (Matavire et al., 2010). To effectively adopt e-governance initiatives in communities, there are three skills that are essential: one information technology skills; secondly, Information Managementskills, and thirdly Information Society (Maranga, 2012). Information technology skills refers to the hard technical skills, information management skills refer to technical skills required to deploy and manage ICT infrastructure, while information society skills refer to the soft skills that are required to do basic operations using ICT infrastructures (Padomichelaki & Mentzas, 2012).

Information society (IS) skills are essential for the users of e-governance. This is because the user's only need to interact with the interface at the front end of the IT platforms that form e-governance (Carter & Belanger, 2012). Well managedgovernment agencies react positively to the need for e-government skills as required by the users of their services. To this end, they institute trainings and outreaches within communities that enhance skills that are essential for the adoption of e-governance (Monga, 2008). For instance, the government of Singapore enhanced e-governance adoption by developing ICT kiosks both in the urban centers and in the rural centers. As a result, Singapore has a 75% adoption rate of e-governance services (World Bank, 2014).

Therefore, basic skills like how to open a web browser, how to enter web addresses, how to conduct online search using web engines like google, how to attach and upload document, how to scan and print documents are very essential in enhancing the adoption of e-governance (Carter & Belanger, 2012). However, Davis (2013) argues that enhancing information society (IS) skills is not in itself sufficient to guarantee the adoption of e-government services. He further argues that information society (IS) skills go hand in hand with IT infrastructure, and efficient and timely delivery of e-government services. In cases where citizens are highly vast with e-government skills yet there is poor infrastructure or bureaucratic inefficiencies, e-governance adoption willfail. Public administration is usually characterized with high levels of bureaucracy. If hierarchies within the governance structure exerts powerful influences on how e-governance services are delivered, then, efficiency in service delivery is hampered. Therefore, a balance between skill set required for e-governance should be balanced off with management support, IT infrastructure and operational efficiencies (Stanforth, 2012).

In e-governance, different groups using similar or different components of e-governance have different levels of exposure to risk. Equally, different e-government project, or modules have different procedures, rules, and different specific stakeholders to whom it provides services, and as a result, diverse e-government angles of exposures to risk both internally and externally (Shareef, Kumar, Kumar, & Dwivedi, 2011). It is therefore incumbent upon government agencies offering e-government services to ensure that there are sufficient risk mitigation mechanisms to protect users, and also to make it easier for them to use the services.

Colesca (2009) defines risk as the citizen's subjective expectation that they will suffer a loss by pursuing a desired outcome. For e-government, it is the fear that the impersonal nature of the online or e-government environment, and the use of impersonal technology, can lead them to suffer loss of information, data, and even financial resources (Shareef, et al., 2011). When dealing with e-governance transactions, a user in placing trust in e-governance to cushion them from any form of attach that might compromise the integrity of their online activities. The effort of doing this for a user should be minimal. Stanforth, (2012) argues that users have to feel a level of comfort that affirms their expectation to online transactions safety. As a result, the level of perceived risk, or real risk has a significant relationship with adoption of e-governance.

One of the barriers in the adoption of e-governance is lack of understanding by the users on risk mitigation mechanisms for technology use. This is collaborated a study conducted by MacDonald, Smith and Appleton (2011) that indicated that real risk or perceived risk directly or indirectly influences the intention to continue using e-Government websites. Thus, it is important that government agencies enhance localized training at the grassroots level as a way of mitigating clients perceived risksof engaging e-governance services.

Other mechanisms for mitigating risk in using e-government websites by MacDonald, Smith, and Appleton (2011) are highlighted in Table 2.1

Table 2.1: E-governance Risk Mitigation Mechanisms

Mechanism	Description
Enhance User knowledge of electronic systems and websites	Increasing Users awareness of the e-government applications, electronic systems and websites through robustness and knowledge decreases the chances of users making mistakes when using e-governance.
Beware of projects pitfalls	Training users on internet and e-governance pitfalls enhances their chances of avoiding those pitfalls, thus reducing the tendency
Enhance use of secure systems	By deploying secure systems that have several layers of authentication and approvals reduces e-governance risk

2.3.3 Social Influence and Adoption of E-Governance

In any given society, social influence, attitudes, beliefs, norms, culture forms the basis from which individual perceive things. E-governance is therefore not immune from social constraints and confluence that inhibit or enhance its adoption. For this study, community culture, peer influence, and government's role will be reviewed. Communities adopt prevailing cultures that dictates how they respond to changes in their normal way of doing things. Leadership structures and bureaucratic hierarchies do not just affect organizations but communities as well (World Bank, 2014).

Communityculture to a larger extent influences the manner in which government agencies deliver services to the public. Culture embraced within a community is defined as the set

of assumptions shared in common by members of a community. There are two major assumptions in common; beliefs and values. Beliefs are assumptions by members within the community about realities that are derived and reinforced by their experience (Azhar, 2003). On the other hand, values are assumptions about ideals that members of a community consider desirable and worth striving for. In government agencies beliefs and values form a culture that define whether the agency would develop mechanisms for efficient service delivery or not (Sarker et al, 2011).

Well-managed government agencies react positively to e-government platforms of service delivery compared to government agencies resistant to change. Public administration is usually characterized with high levels of bureaucracy. If hierarchies within the governance structure exerts powerful influences on how e-governance services are delivered, then, efficiency in service delivery is hampered. In as much as government agencies may adopt e-governance platforms, powerful leadership and bureaucratic hierarchies may hinder effective execution and delivery of e-governance services (World Bank, 2014).

The strong or weakculture within the government itself affects the ability for the agencies to adopt e-governance strategies (Monga, 2008). Further, culture not only affects the way members of the community perception about using e-government behave within organizations, but how they interact with the e-governance strategies and platforms (McCarthy, Minichiello & Curran, 2000). Therefore, the ability for a government agency to develop and enhance a culture that is conducive to the adoption of e-governance strategies determines the extent to which the agency delivers quality and efficient e-governance services.

Social influence on e-governance adoption has significant relationship particularly with peer group members(Talukder & Quazi, 2011). Whether peer influence is felt within the organization or within the community, its impact is felt based on how different peer groups adopt a given trend, or reject a given trend. In e-governance, peer influence, for instance using computers within certain age group can push members of that group to start using computers (Sarker et al, 2011).Similarly, if members of a given peer group adopt and starts utilizing e-governance services, other members within the group are compelled to do the same. Peer group perceptions influences group think, which can work for or against e-governance based on the feelings of the group (Shareef, et al., 2011).

To influence perception of value within a peer group, one should target opinion shapers within that group (Talukder & Quazi, 2011). Opinion sharpers within a group can influence the direction that or a position a group adopts, whether it have merits or not. Equally, perception value of e-governance can be formed through signals and other messages that are delivered by peers (Sarker et al, 2011). Even in private organizations and public organizations employees aresignificantly impacted by opinions of their peers.

Therefore, government agencies seeking to enhance adoption and utilization of e-governance should find mechanisms of influencing and motivating influential groups within the organization to be champions of e-governance initiatives (Sarker et al, 2011). Similarly, Laudon and Traver (2011) argues that the significanceof adoption of e-governance for users within the organization or outside the organization reflects on the behavior of peers within the group whoenthusiastically endorsed the adoption of e-governance. Most employees within organizations, or private citizens in a community observe their counterpart's activities before replicating the behavior. Further, adoption of e-governance can be wellexecutedby passing the ideas through excellent communication

channels between individuals within organizations or community (users) that generate powerful synergies(Sarker et al., 2011; Talukder & Quazi, 2011).

2.3.4 Facilitating Conditions and Adoption of E-Governance

Facilitation Conditions are defined as the degree to which there exists mechanisms such as government support, technical infrastructure, transparency, moral support, adequate financial resources among others, to support their use of e-governance system (Venkatesh et al., 2003). This study will explore facilitating conditions in terms of ICT infrastructure, accountability, transparency, and government support.E-governance can only be made viable through expansion of ICT infrastructure so as to enable people both in the urban and rural areas access government services (Carter & Belanger, 2012). Some of the ICT infrastructure for e-governance includes satellite transmitters, fiber cables, network cables.E-governance requires ICT infrastructure that would necessitate easy access by citizens to the government and governance processes(Monga, 2008).

In Africa, especially, lack of networks, or poor ICT networks and infrastructure exacerbate the difficulties of communications between citizens and government. According to World Bank (2014) report, almost 70% of rural African populations find it difficult to access government and governance services. ICTs, especially the Internet and Web, can be used to develop a democratic culture in Africa through revitalizing open and public debate, establishing open government, enhancing interactions between the government and those being citizens, promoting equity, and strengthening the capacity of public officials.

Perspectives on the core ICT requirements for successful implementation of e-Government differ throughout literature. For instance,Borins (2002) asserts that e-Government relies decentralized Information Technology (IT) networks, implying the

ability to use dispersed networks is key. Stanforth (2012) on the other hand argues that ICT infrastructure on itself doesn't do much since e-governance implementation is inherently a political process as opposed to it being a technology process.

Creation of e-governance websites is one of the ways governments expand citizen's access to government and governance services (Njuru, 2011). Websites enhances access since one doesn't have to physically visit a government office to get services. At the same time, multiple people can access services simultaneously compared to traditional way where citizens visiting a government office have to be served one at a time. However, the digital divide in developing counties is huge in that websites can be available, but lack of skills to access the websites by rural citizens hinders the essence of e-governance. Further, lack of consideration for social cultural and economic context in which ICT implementation occurs leads to failure of adoption. As such the literacy levels communities that are to utilize e-governance services might be a challenge, as low literacy levels hinder the types of media available for e-Government (Kitaw, 2006; Matavire et al., 2010).

United Nations Report (2003) on the World Public Sector (2003) indicates that many developing countries suffer from the digital divide, and they are not able to deploy the appropriate infrastructure in form of websites and other online local content for e-Government deployment (World Bank, 2003). Matavire et al., (2010) further argues that lack of coherent online local content policies, ICT infrastructure, skilledhuman capital development, may hinder effective adoption of e-governance strategies.

Accountability mechanisms do enhance credibility of e-government platforms as channels of service delivery (Reijswoud, 2008). Since e-governance enables citizens to participate in government decision processes, information can be transmitted faster, at lower costs

compared to traditional ways of getting information from the government. When proper accountability mechanisms are in place, internal and external communication to gain speed, precision, simplicity, and networking capacity, which can then be converted into cost reductions and increased effectiveness for e-governance (Matavire et al., 2010). These are features desirable for all government operations, but especially accountability for public services and resources. The adoption of ICT platforms under e-governmentenhances transparency and accountability since most of the government expenditures, services audit, and projects are available online for scrutiny. Some of the areas that e-governance enhances accountability includes transparency utilization of government revenue, and transparency government development projects.

Governments in the developing world have been under considerableand national pressure to review and update the utilization of government revenues and expenditures in an open, transparent, and accountable manner (Reijswoud, 2008; & Monga, 2008). E-governance has been one of the ways through which governments can enhance transparency in revenue. This is can be done by having the government audited revenues and expenditures posted online on government websites for all citizens to see how the government utilized financial resources. E-governance is part of decentralization that enhances accountability and thereby fosters reduction in corruption particularly in the tendering processes. Traditionally, tendering processes were done using paper work. It was difficult to know who applied for what tender, and how much was awarded for the tender since this was the reserve of few technocrats in government offices (World Bank, 2014). However, with e-governance, all procurement processes go through e-procurement are available to all for scrutiny. As a result, the pressure through e-governance to keep all tenders and procurements open through online platforms has increased transparency and accountability in utilization of government revenues (United Nations, 2003).

In developing countries, development projects are the prerogative of the ruling government, where projects are entered into without any input from the public. In Kenya for instance, the old constitution placed the prerogative of development projects on the central government, which was implemented through decentralized units consisting of provincial, and district commissioners, working at the behest of the central government (GoK, 2010). However,the Constitution of Kenya (2010) entrenched the concept of public participation in all development projects within the devolved units. This is implemented through County Integrated Development Plans (CIDP), where the Public Finance Act of 2012 mandates county governments to form county development committee with public member's representation. Equally, private citizens can present their views online to the committee, and monitor development projects online in terms of costs and implementation. This nature and kind of transparency is brought about by e-governance frameworks for public participation.

Similarly, public citizens can audit or request for County government information on projects using online platforms. The need for a more efficient and effective public administration has necessitated the drive towards adoption of e-governance strategies in public projects audit and implementation (Monga, 2008). As a result, cases of corruption and misuse of government resources through development projects can easily be detected as a result of ICT platforms adopted by e-governance (Budhiraja, 2005).

Studies done by Carter and Belanger, (2012), Stanforth (2012), Matavire et al., (2010) indicated the existence of direct relationship between government support and adoption of e-government services. Government support is essential in providing the policy that guides the design, implementation and adoption of e-government services (Stanforth, 2012). Government policy on adoption of on e-government provides guidance to government agencies and department to initiate mechanisms such us IT design, e-

government architecture, software, hardware's, and skills that are essential to deploying e-governance initiatives (Sarker et al, 2011).

Government support also comes in the form of financial support. Adoption of e-governance initiatives means that government must have laid out sufficient infrastructure that allows for the adoption of e-governance (Sarker et al, 2011). The ICT infrastructure that e-governance runs on are expensive to implement, and roll out. The software's and other hardware's required to establish e-governance initiatives are also capital intensive, therefore needs government financial support (World Bank, 2014). Another area that needs government support in enhancing the adoption of e-governance is e-governance knowledge, and skills. To this end, government is responsible in establish training and capacity building for employees within government that are running the implementation and adoption of e-governance, and also, responsible for establishing training ICT clinics for the public on how to utilize e-governance initiatives (Matavire et al., 2010).

2.4 Theoretical framework

This study will be guided Unified Theory of Acceptance and Use of Technology (UTAUT) Model to determine e-governance adoption (Venkatesh et al., 2003). UTAUT is highly recommended model since it incorporate eight other theories such as Theory of Planned Behavior (TPB), Theory of Reasoned Action (TRA), Innovation Diffusion Theory (IDT), Technology Acceptance Model (TAM), Motivational Model (MM), Combined TAMTPB(C-TAM-TPB), Model of PC Utilization (MPCU), and Social Cognitive Theory (SCT). Venkatesh et al., (2003) conducted a hypothesis on the eight IT models to determine their effectiveness, and in so doing developed Unified Theory of Acceptance and Use of Technology (UTAUT) by combining significant components from the eight models as illustrated in Table 2.1

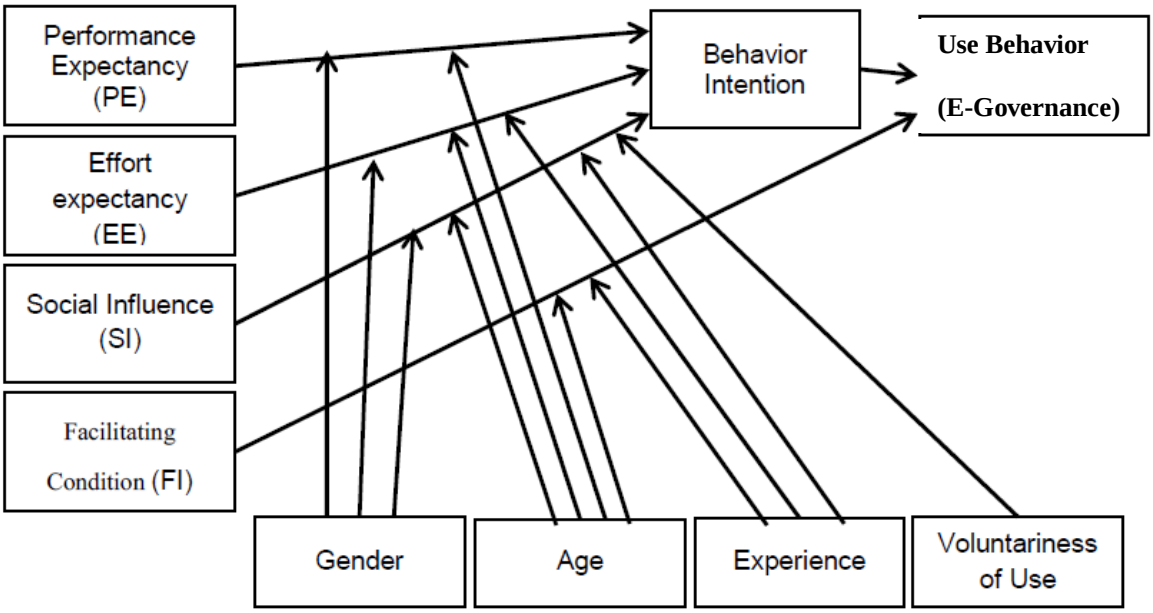
Table 2.1: Determinants of UTAUT with Other Technology Acceptance Models

Model name	Determinants (UTAUT)			
	Performance Expectancy (PE)	**Effort Expectancy (EE)**	**Social Influence (SI)**	**Facilitating Conditions (FC)**
TAM	Perceived usefulness	Perceived ease of use	-	-
TAM2	Perceived usefulness	Perceived ease of use	Subjective norm	-
TRA	-	-	Subjective norm	-
TPB/DPTB	-	-	Subjective norm	Perceived behavioral control
C-TAM-TPB	Perceived usefulness	-	Subjective norm	Perceived behavioral control
MPCU	Job-fit	Complexity	Social factors	Facilitating conditions
IDT	Relative advantage	ease of use	Image	Compatibility
MM	Extrinsic motivation	-	-	-
SCT	Outcome expectations	-	-	-

Source: (Venkatesh et al., 2003)

The UTAUT model consists four determinants of factors for adopting e governance and other information technologies which includes performance expectancy, effort expectancy, social influence, and facilitating factors. The model also has intervening factors such as gender, age, experience and voluntariness of use. Performance Expectancy includes how efficient, effective, and quality e-governance services are executed. Effort expectancy on the other hand is the degree of ease that is associated with use of the e-government system. In the UTAUT Model, social influence refers to the degree of importance that individuals place e-governance based social context perceptions. For instance, how organizational culture is structures, and influential people think about the system, thus, informing whether the user will adopt the system or not adopt the system. Facilitation Conditions on the other hand are defined as the degree to which there exists

technical infrastructure to support their use of e-governance system (Venkatesh et al., 2003). The UTAUT Model is highlighted in Figure 2.1



Source: (Venkatesh et al., 2003)

Figure 2.1: The Unified Theory of Acceptance and Use of Technology

2.5 Empirical Review of Literature on E-Governance

E-governance is defined as the utilization of ICT platforms that transforms the delivery of government services to internal and external government stakeholders (World Bank, 2014). Further, the World Bank describes e-governance as a complex socio-technical system where government agencies that are involved in providing services to heterogeneous stakeholders utilize ICT platforms to do so. E-government utilizes (ICT) to transform government services by making the services more accessible, while at the same time providing the services in an effective and accountable manner (Matavire et al., 2010).

Sharma (2007) equally argues that e-governance is the process through which government departments adopts and utilizes information and communication technologies

to improve transparency and accountability, efficiency, and effectiveness, of service delivery to the public. Evans and Yen (2006) similarly notes that e-governance strategies enable government to improve delivery of services to the public via information and communication technologies platforms, thereby enhancing efficiency and effectiveness. However, e-governance definitions provided are too narrow, to capture the holistic essence of public service delivery (Ndou, 2004).

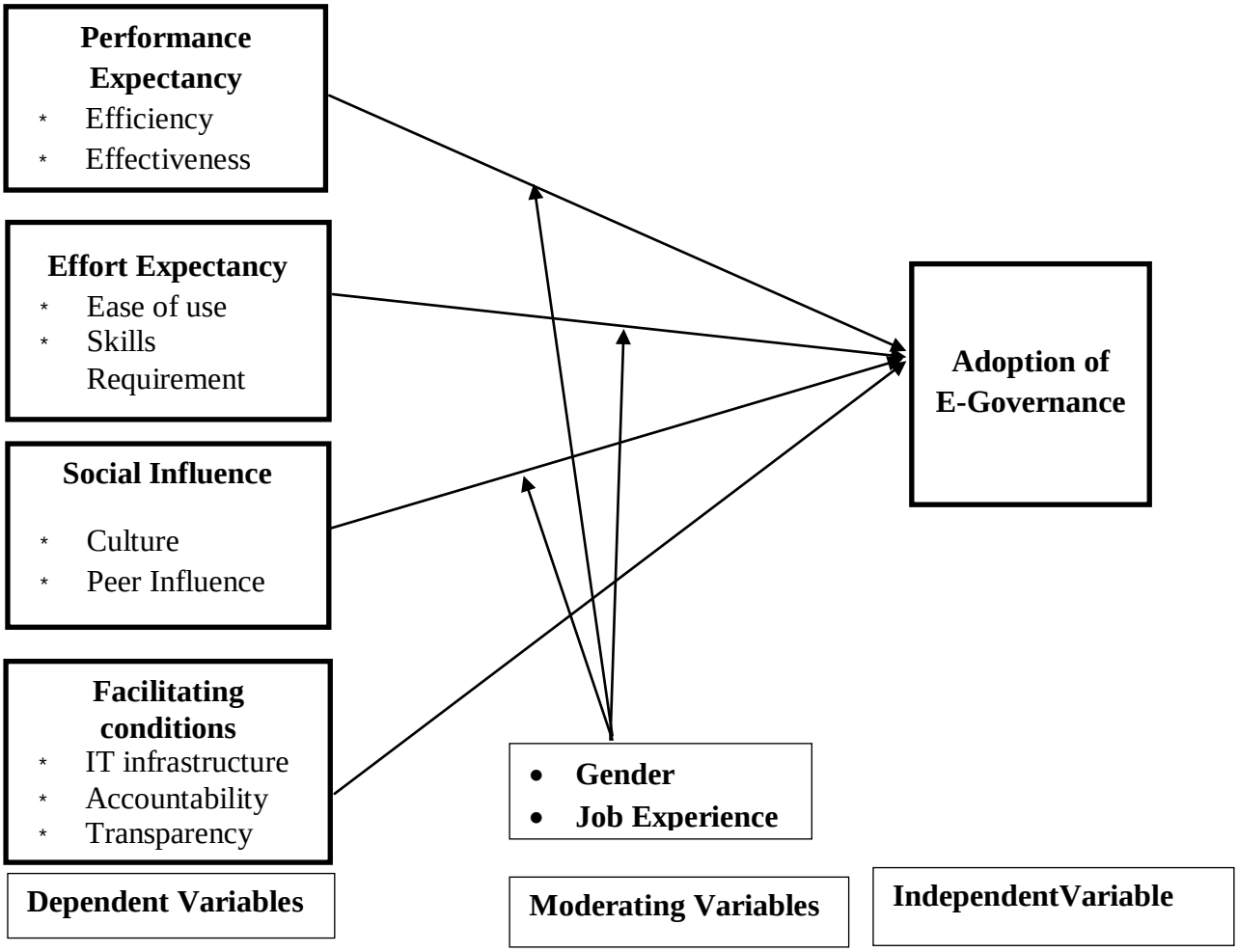
United Nations Division for Public Economics and Public Administration (UNDPEPA) classification has five stages of e-governance strategies. The first stage is One-way communication, where the government provides basic website for information. In this stage the websites provide the public with information, provides answers to frequent asked questions, and also government agencies contacts are provided. The second e-governance strategy is two-way communication enhanced website. This website provide access to specific information that is regularly updated; With a central portal to other department sites. The public can download useful documentshere online. Search engine features, e-mail and areas for comments are provided. The third e-government strategy is where websites and online portals have interactive web presence. The public seeking services from government can search through specialized databases, download forms, fill in forms and submit them online through secure authentications and passwords (World Bank, 2014; Matavire et al., 2010).

The fourth e-governance strategy is the use of online portal personalization. At this point private citizens seeking government services are able to conduct complete and secure transactions through online platforms. The government websites will allow portal personalization in order to have users directly access services based on specific needs. The other strategy in e-governance is where government offers fully integrated portal

where all government services are linked to a single portal. All government services are provided online through this integrated portal. This allows government to speed service delivery with precision, simplicity, and efficiency.

2.8 Conceptual Framework

The conceptual framework for this study is structured as follows:



Adopted from (Venkatesh et al., 2003)

Figure 2.2: Conceptual framework

The conceptual model consists four determinants for adopting e-governance and other information technologies which includes performance expectancy, effort expectancy, social influence, and facilitating factors, which will form the independent variables of the study. Performance Expectancy is the performance of information technology from the

user point of view. This includes how efficient, effective, and quality e-governance technology is. Effort expectancy on the other hand is the degree of ease that is associated with use of the e-government system. Social influence refers to the degree of importance that individuals place on e-governance based on social context. Facilitation conditions on the other hand consists of ICT, accountability, infrastructure, transparency and government support. Gender and job experience were used as moderating variables in this study, while adoption of e-governance was the dependent variable.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter describes research methodology that was used to collect and analyze data. The research design is presented first, followed by population and sampling, sampling design, data collection methods, Data analysis methods, research procedures and finally the chapter summary.The studyadopted a descriptive survey research design to conduct the study. A descriptive survey is one in which information is collected without changing anything or manipulating the environment. A descriptive survey was appropriate for this study because descriptive survey enables a researcher to collect both quantitative and qualitative data without manipulating the study environment.

3.2 Target Population

The target population for this studywas 12, 946 consisting ofNairobi City Countyofficials across different sectors, County executive committee members, public service board members, advisors to the office of the governor, and registered users of e-governance services. The target population distribution is indicated in Table 3.1.

Table 3.1 Target Population

Sector	**Totals**
County Departments Sector Managers and assistant managers	580
County Executive Committee Members	10
Public Service Board Members	5
Governors Advisors	5
Employees	12, 246
Users of e-governance Services	100
Total	**12, 946**

Source: (Nairobi County Website, 2016)

Stratified sampling and random sampling techniqueswere adopted for this study. The sampling frame for this study was obtained from Nairobi County office in Nairobi.

3.3 Sample Size

Thesample size of this study consists of 384 respondents. To determine the sample size, Krejcie& Morgan (1970) formula was adopted as follows:

$$S = \frac{X^2 NP\ (1-P)}{d^2(N-1)} + X\text{^}2P(1-P)$$

S = required sample size

X^2 = the table values of chi-square for 1 degree at the desired confidence level (3.841)

N = the population size

P = the population proportion (assumed to be .50 since this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion (.50)

(Source: Krejcie& Morgan, 1970)

Sample size = 3.841 *12, 946 *.50(1-.50) / {(.05^2 (12, 946- 1) + 3.841*.50(1-.50)}

= 384

Table 3.2: Sample Size Distribution

Sector	Totals	%	Sample Size
County Departments Sector Managers and assistant managers	580	15%	87
County Executive Committee Members	10	50%	5
Public Service Board Members	5	100%	5
Governors Advisors	5	100%	5
County Health Officer	342	14%	48
County Accountant	158	32%	50
County Inspection Officer	422	9.5%	40
County Human Resource Officer	54	22%	12
County Program Officer	600	2%	88
General User of e-governance	100	40%	40
Total			**384**

Source: (Nairobi County, 2016)

3.4 Data Collection Methods

This study utilized primary data only. Structured questionnaires wereused to collect the primary data.The first section comprisedgeneral questions seeking to establish respondents' demographic data such as gender, age, level of education, tenure at the county, and their cadre. Second section dealt with first research question on the extent to which performance expectancy enhances adoption of e-governance strategies. The third section dealt with second research question on the extent to which effort expectancy enhances adoption of e-governance; the fourth section dealt with the third research question on the extent to which social influence enhances adoption of e-governance, while the last section dealt with questions on facilitating conditions.

A pilot rest of 10 questionnaires was used to conduct a pilot test to determine the reliability and validity of the questionnaire tool. The findings of the pilot were used to adjust questions that needed clarity, and simplify those that were a bit confusing to respondents. A Cronbach Alpha was used to conduct test reliability. The study had an Alpha value of 0.877, meaning the questionnaire tool was very reliable.

3.5 Data Analysis

Data analysis was done using the Statistical Package for Social Services (SPSS) version 21. Factor analysis was used to check construct validity of the study questions in relation to adoption of e-governance. Data has been analyzed for frequencies, percentages, correlations, and regressions. Descriptive statistics has been presented using tables and figures, while inferential statistics has been presented using tables. In addition, inferential statistics was used to examine the existence of any relationships between dependent, moderating and independent variables.Multipleregression and ANOVAwere used to determine the level of significance for the study variables.

3.7 Ethical Consideration

Informed Consent was sought from the study respondents prior to the interviews. The study ensured respondents anonymity was upheld. This was done to ensure the study maintained ethical level confidentiality. Permission was also sought form Nairobi City County by presentation of a request letter provided by Kenyatta University.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

This chapter presents the study results and findings. Demographic and descriptive statistics are presented first, followed descriptive statistics on UTAUT model variables (performanceexpectancy, effort expectancy, social influence, and facilitation conditions. Secondly, inferential statistics on UTAUT model variables (performanceexpectancy, effort expectancy, social influence, facilitation conditions in addition to moderating variables (gender and job experience) are presented.

4.2 Demographic Statistics

This study had a 52% response rate. Some of the respondents were not available during the entire period of the study, while other questionnaires were not returned. However, 52% is an acceptable response rate. The demographic data descriptive statistics are provided in table 4.1. The findings of the study indicated that (52%) of respondents were male, while (48%) of respondents were female. Forty-seven (47%) of respondents were aged between 34 and 54 years, (29%) of respondents were aged between 26 and 34 years, (18%) of respondents were aged between 18 and 25 years, while (6%) of respondents were aged 55 to 64 years. When respondents of the study were asked to indicate their level of education, majority (62%) of respondents indicated they had a college level education, (28%) of respondents indicated they had university degree, (6%) had a high school education, while the remaining (4%) had post graduate level education. Respondents were also asked to indicate the method they used to access e-governance services. The findings show that (36%) of respondents used office computers to access e-governance services, (21%) used cyber cafes, (16%) accessed e-governance using their mobile phones and their tablets, while the remaining (11%) indicated that they accessed e-governance services using their home computers as indicated in table 4.1.

The findings of the study show that (21%) of respondents were county program officers, (19%) of respondents were users of e-government services, (15%) were county senior managers, (11%) were county healthy officers, (10%) were county inspection officers, (9%) indicated they were county accountants, (6%) were county HR officers, while the remaining (3%) were governor's advisors, public service board members, and executive committee members respectively.

When respondents of the study were asked to indicate their level of experience with e-governance. The findings show that (48%) of respondents indicted had moderate experience in dealing with e-governance, (17%) of respondents had little experience, (13%) had very good experience, with the other (13%) having very little experience, while the remaining (9%) indicated that they had good experience. This study also sought to determine whether respondents of the study had received any training on e-governance services. The findings show that (55%) of respondents indicated that they had received training, while (45%) indicated that they had not received training on e-governance.

When respondents were asked to indicate the kind of e-governance training they had received. The findings show that (40%) of respondents received training on online payment systems, (27%) received training on how to use online forms, (17%) received training on filing taxes, while (8%) indicated online correspondence and online approval services as indicated in table 4.1.

Table 4.1: Demographic Descriptive Statistics

Categories	Frequency	Percentage
(A) Gender		
Male	103	52
Female	97	48
Total Sample Size	200	
(B) Age		
18-29 Years	36	18
26-34 Years	57	29
35-54 Years	94	47
55-64 Years	13	6
65 and above	0	0
Total Sample Size	200	
(C) Level of Education		
High School	11	6
College	125	62
University	56	28
Post Graduate	8	4
Total Sample Size	200	
(D) Method of Accessing E-governance		
Office Computer	72	36
Mobile Phone	32	16
Home Computer	22	11
Tablet	32	16
Cyber Cafe	42	21
Total Sample Size	200	
(E) Job Description		
Users of e-governance	20	15
Program Officer	5	2.5
HR Officer	5	2.5
Inspection Officer	5	2.5
Accountant	20	10
Health Officer	20	10
Governors Advisor	20	10
Board Member (Public Service	12	6
Executive Committee Member	43	21.5
Senior Manager	40	20
(F) Experience with E-Governance		
Very Good	72	36
Good	32	16
Moderate	22	11
Little	32	16
Very Little	42	21
(G) Training on E-Governance		
Yes	110	55
No	90	45
(H) Types of E-Governance Training		
Online Correspondence	54	27
Online Approval Services	80	40
Filing Taxes	34	17
Online payments	16	8
Online Forms	16	8

4.3 Factor Analysis

Earlier research by Venkatesh et al., (2003) had validated measures for constructs under the ATUAT model. This study adopted and tested the validated constructs for the questionnaire as indicated in table 4.2. Figure 4.5 provides the findings and results for the confirmatory factor analysis. The results revealed that almost all items in the questionnaire were proper measures of corresponding constructs. However, item EE6 (-0.28) was dropped from the analysis since they were negative and their factor loading were very low. The highest factor loading was FC8 (0.98), followed by PE6, PE8 with (0.65) and PE4 (0.94). Other than EE6 that was dropped from further analysis other lower factors included SI2 (0.38) and SI5 (0.44) as indicated in figure 4.5.

Table 4.2: Constructs and Questionnaire Items

Variables	Scaled variable	Questionnaire Items
Performance Expectancy	PE	PE1: How has e-governance platforms helped speed up delivery of services PE2: How has e-governance enhanced satisfaction with delivery of services PE3: How has e-governance enhanced efficient delivery of services at Nairobi county PE4: How has adoption of e-governance enhanced effectiveness in delivery of services PE5: To what extent has the adoption e-governance enhanced quality in delivery of services PE6: To what extent has e-governance has improved communication PE7: To what extent has e-governance reduced corruption in accessing services PE8: To what extent has e-governance enhanced performance at Nairobi County
Effort Expectancy	EE	EE1: To what extent are e-governance platforms easy to use at Nairobi County EE2: To what extent has e-governance technology helped you access government services EE3: Errors in e-governance platforms get fixed, making it convenient to use the system EE4: To what extent is government information easily available on e-governance platforms EE5: To what extent is the e-governance information up to date EE6: To what extent are you frustrated using e-governance platforms at Nairobi County
Social Influence	SI	SI1: To what extent do your colleagues expect better service using e-government platforms SI2: To what extent do your colleagues expect you can use e-governance efficiently SI3: To what extent do you believe e-governance is essential to improving service delivery SI4: To what extent do your colleagues influence your adoption of e-governance services SI5: To what extent have you been trained on how to use e-governance platforms SI6: How does the culture of change at Nairobi County enhanced the adoption e-governance
Facilitating Conditions	FC	FC1: To what extent does adequate I.T infrastructure influence adoption of e-governance FC2: How has I.T infrastructure enabled faster and quicker delivery of e-government services FC3: To what extent do you have enough resources required to access e-governance services FC4: E-governance services accessible on different ICT platforms FC5: To what extent has e-governance enhanced accountability in delivery of services FC6: How has training of employees on e-governance facilitated adoption of e-governance FC7: How has the training of Nairobi residents facilitated adoption of e-governance FC8: To what extent has government policies enhanced adoption of e-governance services

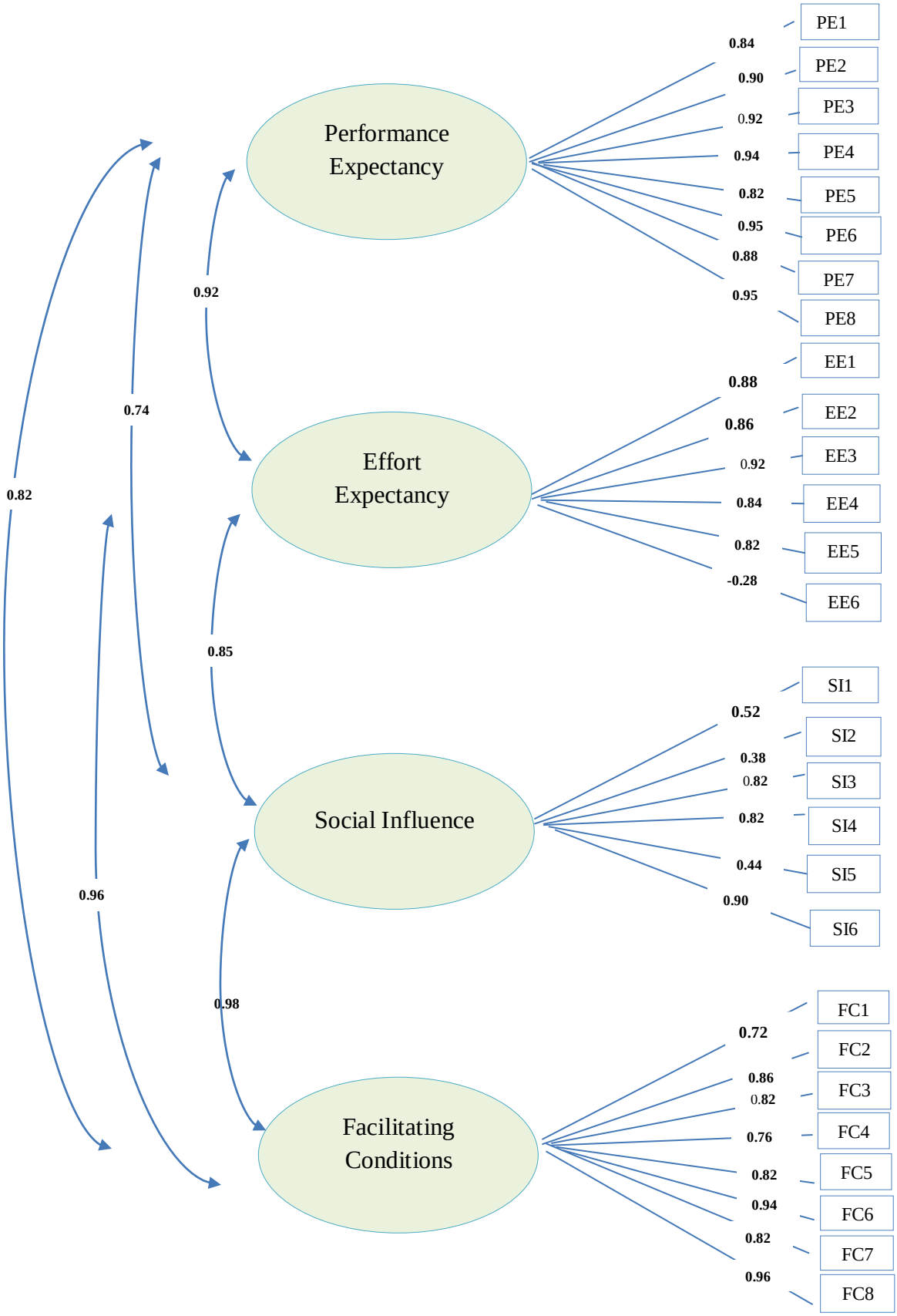


Figure 4.1: **Construct Validity: Results of a Confirmatory Factor Analysis**

4.4 Performance Expectancy and Adoption of E-Governance

This study sought to determine whether adoption of e-governance had any influence on performance expectation on service delivery. The findings are highlighted in the following sections.When respondents were asked how adoption of e-governance platforms had helped in delivery of services, a majority (83%) of respondents believed that adoption of e-governance had significantly helped in delivery of services, (7.5%) indicated that the help was to a moderate extent, (6.5%) indicated that the help was to a little extent, while the remaining (3%) believed that e-governance platforms had not helped improve service delivery at all. The response had a mean M (4.62) as indicated in table 4.3. These findings are supported by Settles (2015) who had argued that there exists a positive relationship between efficient delivery of services and e-governance. Further, Settles had argued that e-government had enabled public institutions to institute efficiency in the way payables and receivables are done within the public sector. Thus, to enhance how government services are done, there is need to e-governance systems with e-payment modules for quick and easy payment transactions.Literature on e-governance had also revealed that the existence of a direct positive relationship between efficiency in financial systems and adoption of e-governance for both the users and those who administer e-governance services (Venkatesh et al., 2003; Colesca, 2009; Papadomichelaki & Mentzas, 2012; Settles, 2015)

Respondents of the study were asked to indicated how adoption of e-governance services had enhanced satisfaction with delivery of services. The findings show that majority (82%) of respondents felt that adoption of e-governance had significantly enhanced satisfaction with delivery of services, about nine percent (8.5%) indicated the satisfaction was to a moderate extent, (6%) felt the satisfaction was to little extent, while the remaining (3.5%) felt adoption of e-governance services had not enhanced satisfaction in

delivery of services at all. The response had a mean M (4.359) as indicated in table 4.3. This is also in line with Matavire et al., (2010), who argued that e-government had enabled government and the public sector to develop mechanisms that enhances quality of work (Matavire et al., 2010). E-governance platforms had also offered a host of transformation capabilities ranging from shrinking communications and costs, maximizing speed, broadening delivery to the public, and also helps in eradicating distance for service delivery(Reijswoud,2008).

Respondents of this study were asked to indicate how adoption of e-governance had enhanced efficiency in delivery of services. Majority (74%) felt that adoption of e-governance had significantly enhanced efficiency in delivery of service, (18%) felt efficiency was enhanced to a moderate extent, (5%) indicated to a little extent, while the remaining (3.5%) felt that adoption of e-governance had not enhanced efficiency in delivery of services at all. The response had a mean M (4.40) as indicated in table 4.3

This study sought to determine how adoption of e-governance services had enhanced effectiveness in delivery of services. The findings show that majority (90%) of respondents felt that adoption of e-governance had significantly enhanced effectiveness of service delivery, (9.5%) indicated to a moderate extent, while about one percent (0.5%) felt that adoption of e-governance had enhanced effectiveness in delivery of services to a little extent. The response had a mean M (4.42) as indicated in table 4.3

When respondents of this study were asked to indicate how adoption of e-governance had enhanced quality in delivery of services, majority (86%) felt that adoption of e-governance had significantly enhanced quality in delivery of services, (6.5%) indicated that quality enhancement was to a moderate extent, (5.5%) indicated to a little extent,

while the remaining (2.5%) felt that adoption of e-governance had not enhanced quality in delivery of services at all. The response had a mean M (4.72) as indicated in table 4.3

This study sought to find out how adoption of e-governance services had improved communication between the County Government, and Nairobi City residents. The findings show that majority (85%) of respondents believed that adoption of e-governance services had significantly improved communication between Nairobi City County Government and the residents, (10%) indicated the improvement was to a moderate extent, (3.5%) felt that the improvement was to a little extent, and about two percent (1.5%) felt that adoption of e-governance services had not improved communication at all. The response had a mean M (4.60) as indicated in table 4.3

When respondents were asked to indicate to what extent adoption of e-governance had reduced corruption in accessing services at Nairobi City County, majority (92.5%) of respondents felt that adoption of e-governance had significantly reduced corruption, (7%) indicated the reduction was to a moderate extent, while about one percent (0.5%) felt that adoption of e-governance had not reduced corruption at all in accessing services at Nairobi City County. The response had a mean M (4.78) as indicated in table 4.3

Respondents of this study were asked to indicate how adoption of e-governance had enhanced performance at Nairobi City County. The findings show that majority (88%) believed that adoption of e-governance had significantly enhanced performance, while the remaining (12%) indicated that performance enhancement was to a moderate extent. The response had a mean M (4.72). These findings on performance expectancy conform to findings by Venkatesh et al., (2003) who argued for need to have more efficient and public administration has necessitated the drive towards adoption of e-governance

strategies. Bhuiyan (2009) study had also revealed the existence of a positive relationship between effectiveness of service delivery and adoption of e-governance services

The summary of descriptive statistics on performance expectancy are illustrated in table 4.3 below. Not at all = 1; to a little extent =2; to a moderate extent = 3; to a great extent = 4; to a very great extent = 5.

Table 4.3: Descriptive statistics on Performance Expectancy

Statement	Distribution										Mean
	1		2		3		4		5		
	f	%	f	%	f	%	f	%	f	%	
You believe e-governance platforms have helped delivery of services	6	3%	13	6.5%	15	7.5%	69	34%	97	49%	4.620
You are satisfied with delivery of e-governance services	7	3.5%	10	5%	36	18%	55	28%	92	46%	4.359
You believe e-governance enhances efficient delivery of services	1	0.6%	10	6%	59	35.5 %	81	48.8%	15	9%	4.40
You believe e-governance enhances effective delivery of services	3	1.8%	12	7.2%	73	44%	72	43.4%	6	3.6%	4.42
You believe e-governance enhances quality in delivery of services	5	2.5%	11	5.5%	13	6.5%	66	33%	105	53%	4.72
You believe e-governance improved communications	3	1.5%	7	3.5%	20	10%	73	36%	97	49%	4.60
You believe e-governance has reduced corruption	-	-	1	0.5%	14	7%	84	42%	101	50.5%	4.78
You believe e-governance enhances performance	-	-	-	-	24	12%	70	35%	106	53%	4.72

4.5 Effort Expectancy and Adoption of E-Governance

This study sought to determine whether adoption of e-governance services had any influence of effort expectancy in service delivery. The findings as highlighted in table 4.4. On the question on what extente-governance platforms were easy to use at Nairobi County, a majority (88%) believed the platforms were easy, while 12% indicated to a moderate extent. The response had a mean M (4.41). On the question on the extent has e-

governance technology helped you deliver service of receive service from Nairobi County, majority (81%) believed that e-governance technology had helped in delivery of services, 9.5% indicated to a moderate extent, 6% indicated to a little extent, while 3.5% of respondents disagreed that e-governance technology has helped in delivery of services. The response had a mean M (4.20) as indicated in table 4.4.A study conducted by Carter and Belanger (2012) indicated similar findings that 63% of respondents from government institution indicated that e-governance platforms needed to be simplified to enhance ease of use. Key areas for further e-governance simplifications included online payments and business registration processes and procedures. Similarly, a study by Tomasz, Elsa and Irshad, (2007), and Papadomichelaki and Mentzas, (2012) study revealed that 60% of respondents indicated that e-governance has easy of delivery of services compared to queueing for such services particularly in rural communities. The study concluded that for e-government services to be effective, government agencies need to simplify interface and e-governance modules, conduct more sensitization trainings while at the same time, enhance digital e-governance shops within communities.

On the question on the extent to which errors in e-governance platforms get fixed, making it convenient to use the system at Nairobi County, majority (90%) of respondents believed that the errors get fixed, 9.5% indicated to a moderate extent, while only 0.5% indicated not at all. The response had a mean M (4.42). On the question on the extent to which information about Nairobi County services as easily available on e-governance platforms, majority (84%) believed this to be the case, 14.5% indicated they were in agreement to a moderate extent, while 1% agreed e-government services were easily available to a little extent. The response had a mean M (4.33).

When asked to what extent is the e-governance information was up to date, majority (87%) believed that the e-government information was up to date, while 13% indicated the information was up to date only to a moderate extent. The response had a mean M (4.42). On whether respondents were frustrated using e-governance platforms, majority (74%) indicated frustrated, 18% felt they were frustrated to a moderate extent, while 5.5% were not frustrated at all.The response had a mean M (2.36). These findings are also in line with World Bank, (2014) that revealed that the government of Singapore enhanced e-governance adoption by developing ICT kiosks both in the urban centers and in the rural centers. As a result, Singapore has a 75% adoption rate of e-governance services. However, Davis (2013) had argued that enhancing information society (IS) skills were not in itself sufficient to guarantee the adoption of e-government services. He further argued that information society (IS) skills go hand in hand with IT infrastructure, and efficient and timely delivery of e-government services The summary of the descriptive statistics on effort expectancy is illustrated in table 4.4.Not at all = 1; to a little extent =2; to a moderate extent = 3; to a great extent = 4; to a very great extent = 5.

Table 4.4: Effort Expectancy Descriptive Statistics

Statement	Distribution										Mean
	1		2		3		4		5		
	f	%	f	%	f	%	f	%	f	%	
To what extent are e-governance platforms easy to use at Nairobi County	-	-	-	-	24	12%	70	35%	106	53%	4.41
To what extent has e-governance technology helped you deliver service of receive service from Nairobi County	7	3.5%	12	6%	19	9.5%	57	28.5%	105	52.5%	4.20
To what extent do errors in e-governance platforms get fixed, making it convenient to use the system at Nairobi County	-	-	1	0.5%	19	9.5%	67	33.5%	113	56.5%	4.46
To what extent does information about Nairobi County services easily available on e-governance platforms	1	0.5%	2	1%	29	14.5%	66	33%	102	51%	4.33
To what extent is the e-governance information up to date	-	-	-	-	26	13%	63	31.5%	111	55.5%	4.42
To what extent are you frustrated using e-governance platforms at Nairobi County	7	5.5%	10	5%	36	18%	51	25.5%	96	48%	2.36

4.6 Social Influence and Adoption of E-Governance

This study sought to determine whether adoption of e-governance services had any social influence in service delivery. The findings as highlighted in table 4.5. The question on what extent respondent's colleagues and Nairobi residents expected better service using e-government platforms, majority (88%) believed that their colleagues and Nairobi residents expected to receive better services, 6.5% indicated to a moderate extent, 5.5% indicated to a little extent, while 2.5% indicated their colleagues and Nairobi residents did not expect to receive better e-governance services at all.The response had a mean M (4.28).

On the question on the extent to which colleagues and Nairobi residents expect respondents to use e-governance efficiently, majority (92.5%) indicated they did use e-governance efficiently, while 7.5% indicated they use e-governance services to a

moderate extent.The response had a mean M (4.39). On whether Nairobi residents believed that e-governance was essential to improving service delivery, majority (82%) believed that e-governance services was essential to improving service delivery, 13% felt the improvement was to a moderate extent, 2.5% to a little extent, while another 2.5% indicated service delivery was not improved at all. The response had a mean M (4.30).

On the question on whether respondent's colleagues had influenced adoption of e-governance services, majority (88%) believed their colleagues had influenced their adoption of e-governance services, while 12% indicated their colleagues had influenced them to a moderate extent. The response had a mean M (4.41). On the issue on whether the respondent had been trained on how to use e-governance platforms, majority (82%) indicated they had been trained, 8.5% indicated the training was to a moderate extent, 6% to a little extent, while 1.5% indicated they had not been trained at all.The response had a mean M (4.19). Finally, on how the culture of change at Nairobi County had enhanced the adoption e-governance, majority (85%) felt that the culture of change had influenced adoption of e-governance, 10% believed the influence was to a moderate extent, 3.5% to a little extent, and 1.5% indicated that the culture of change had not changed at all as illustrated in table 4.5. These findings are in line with Monga (2008) who argued that a strong or weak culture within the government itself affects the ability for the agencies to adopt e-governance strategies (Monga, 2008). Further, he noted that culture not only affects the way members of the community perception about using e-government behave within organizations, but how they interact with the e-governance strategies and platforms (McCarthy, Minichiello & Curran, 2000). Therefore, the ability for a government agency to develop and enhance a culture that is conducive to the adoption of e-governance strategies determines the extent to which the agency delivers quality and efficient e-governance services.

Social influence on e-governance adoption has significant relationship particularly with peer group members (Talukder & Quazi, 2011). Whether peer influence is felt within the organization or within the community, its impact is felt based on how different peer groups adopt a given trend, or reject a given trend. In e-governance, peer influence, for instance using computers within certain age group can push members of that group to start using computers (Sarker et al, 2011).

The response had a mean M (4.27). Not at all = 1; to a little extent =2; to a moderate extent = 3; to a great extent = 4; to a very great extent = 5.

Table 4.5: Descriptive Statistics on Social Influence

Statement	Distribution										Mean
	1		2		3		4		5		
	f	%	f	%	f	%	f	%	f	%	
To what extent do your colleagues and Nairobi residents expect better service using e-government platforms	5	2.5%	11	5.5%	13	6.5%	65	35%	106	53%	4.28
To what extent do your colleagues and Nairobi residents expect you can use e-governance efficiently	-	-	-	-	15	7.5%	91	45.5%	94	47%	4.39
To what extent do Nairobi residents believe that e-governance is essential to improving service delivery	5	2.5%	5	2.5%	26	13%	53	26.5%	111	55.5%	4.30
To what extent did your colleagues influence your adoption of e-governance services	-	-	-	-	24	12%	70	35%	106	53%	4.41
To what extent have you been trained on how to use e-governance platforms	7	3.5%	12	6%	17	8.5%	63	31.5%	101	50.5%	4.19
How does the culture of change at Nairobi County enhanced the adoption e-governance	3	1.5%	7	3.5%	20	10%	73	36.5%	97	48.5%	4.27

4.7 Facilitating Conditions and Adoption of E-Governance

This study sought to establish whether the existence of facilitating conditions enhanced adoption of e-governance. The findings are highlighted in table 4.6. The question on the extent to which respondents thought Nairobi County has adequate I.T infrastructure for adoption of e-governance, majority (61.5%) felt that Nairobi County had adequate IT infrastructure, 31% indicated the infrastructure was to a moderate extent, 4% felt the infrastructure is adequate to a little extent, while 3.5% felt the infrastructure was not adequate at all. The response had a mean M (4.46).

On the question on whether IT infrastructure had enabled faster and quicker delivery of e-government services, majority (65.5%) felt that IT infrastructure had enabled fasterdelivery of services, 30.5% felt this was only to a moderate extent, 1.5% felt IT infrastructure had enabled deliveryservice to a little extent, while 2.5% felt IT infrastructure had not helped service delivery at all.The response had a mean M (3.87).

When asked whether respondents had enough resources required to access e-governance services, majority (75.5%) felt they did, 17% indicated the resources were to a moderate extent, 5% to a little extent, while 2.5% felt the resources were not adequate at all. The response had a mean M (4.02). On the question on the extent to which e-governance services were accessible on different platforms such as mobile phones, tables, computers, majority (68.5%) indicated the e-governance was accessible on multiple platforms, 18% indicate accessibility on multiple platforms was to a moderate extent, 5% to a little extent, while 35% felt accessibility was not on multiple platforms at all. The response had a mean M (4.11).

On the question on whether adoption of e-governance had enhanced government accountability in delivery of services, majority (92.5%) felt that to be the case, 7% felt

accountability was only to a moderate extent, while 0.5% indicated e-governance had not enhanced accountability in service delivery at all. The response had a mean M (4.08). When asked whether training of employees on e-governance had facilitated adoption of e-governance, majority (90%) felt training had facilitated adoption of e-governance, 9% felt this was to a moderate extent, while 0.5% felt that training of employees had not facilitated adoption of e-governance at all. The response had a mean M (4.42).

Finally, on the question on whether government policies on the use of e-governance had enhanced adoption of e-governance services, majority (87%) felt that government policies had enhanced adoption of e-governance, while 13% felt government policies had enhanced adoption of e-governance only to a moderate extent. The response had a mean M (4.42). The summary on descriptive statistics on facilitating conditions is illustrated in table 4.6 below. These findings are in line with World Bank (2014) report that indicated that almost 70% of rural African populations find it difficult to access government and governance services. ICTs, especially the Internet and Web, can be used to develop a democratic culture in Africa through revitalizing open and public debate, establishing open government, enhancing interactions between the government and those being citizens, promoting equity, and strengthening the capacity of public officials

Matavire et al., (2010) on the other had had argued that websites enhance access since one doesn't have to physically visit a government office to get services. At the same time, multiple people can access services simultaneously compared to traditional way where citizens visiting a government office have to be served one at a time. However, the digital divide in developing counties is huge in that websites can be available, but lack of skills to access the websites by rural citizens hinders the essence of e-governance. Further, lack of consideration for social cultural and economic context in which ICT implementation

occurs leads to failure of adoption. As such the literacy levels communities that are to utilize e-governance services might be a challenge, as low literacy levels hinder the types of media available for e-Government (Kitaw, 2006)

United Nations Report (2003) on the World Public Sector (2003) indicated that many developing countries suffer from the digital divide, and they are not able to deploy the appropriate infrastructure in form of websites and other online local content for e-Government deployment (World Bank, 2003). Matavire et al., (2010) further argued that lack of coherent online local content policies, ICT infrastructure, skilled human capital development, may hinder effective adoption of e-governance strategies.

Not at all = 1; to a little extent =2; to a moderate extent = 3; to a great extent = 4; to a very great extent = 5.

Table 4.6: Descriptive Statistics of Facilitation Conditions

Statement	Distribution										Mean
	1		2		3		4		5		
	f	%	f	%	f	%	f	%	F	%	
To what extent do you think Nairobi County has adequate I.T infrastructure for adoption of e-governance	7	3.5%	8	4%	62	31%	49	24.5%	74	37%	4.46
How has I.T infrastructure enabled faster and quicker delivery of e-government services	5	2.5%	3	1.5%	61	30.5%	45	22.5%	86	43%	3.87
To what extent do you have enough resources required to access e-governance services at Nairobi County	5	2.5%	10	5%	34	17%	61	30.5%	90	45%	4.02
To what extent are e-governance services accessible on different platforms such as mobile phones, tables, computers	7	3.5%	10	5%	36	18%	55	22.5%	92	46%	4.11
To what extent has adoption of e-governance enhanced government accountability in delivery of services	-	-	1	0.5%	14	7%	84	42%	101	50.5%	4.08
How has training of employees on e-governance facilitated adoption of e-governance at Nairobi County	-	-	1	0.5%	19	9.5%	67	33.5%	113	56.5%	4.42
To what extent has government policies on the use of e-governance has enhanced adoption of e-governance services	-	-	-	-	26	13%	63	31.5%	111	55.5%	4.42

4.8 Correlation Matrix

To determine whether there existed any relationship between the study variables, a correlation analysis was conducted. The findings in table 4.14 indicated strongest relationship exists between facilitating conditions and adoption of e-governance, r (0.760); $p \leq 0.01$; the relationship was statistically significant. This was followed by the relationship between performance expectation and effort expectancy, r (0.725); $p \leq 0.01$, the relationship was statistically significant. This was followed by the relationship between performance expectancy and facilitating conditions, r (0.705); $p \leq 0.01$; the relationship was statistically significant. There also exists a statistically significant

relationship between facilitating conditions and effort expectancy, r (0.683); $p \leq 0.01$. The relationship performance expectancy and adoption of e-governance, r (0.679); $p \leq 0.01$; the relationship was statistically significant. The study also established a positive relationship between effort expectancy and adoption of e-governance, $(0.598) \leq 0.01$; Equally, the study findings show the existence of a statistically significant relationship between social influence and effort expectancy, r (0.471); $p \leq 0.01$. The relationship between social influence and performance expectancy, r (0.425); $p \leq 0.01$ was statistically significant.as indicated in table 4.14.The reliability analysis (Cronbach's Alpha) for the variables was above 0.8, which means that variables were reliable. Effort expectancy had the highest mean M (4.3383) with a standard deviation SD (0.307). Facilitating conditions had the lowest mean M (4.1979) and SD (0.428) as indicated in table 4.14.

Table 4.7: Correlation Matrix

Variables	Mean	SD	Reliability	1	2	3	4	5
1. Performance Expectancy	4.2875	0.365	0.994	1.000				
2. Effort Expectancy	4.2992	0.399	0.812	0.752**	1.000			
3. Social Influence	4.3383	0.307	0.910	0.425**	0. 471**	1.000		
4. Facilitating Conditions	4.1979	0.428	0.828	0.705**	0.683**	0.300**	1.000	
5. E-governance Adoption	4.3110	0.386	0.842	0.679**	0.598**	0.428**	.760**	1.000

***p <0.1*

4.8 Regression Analysis – UTAUT Variables

The findings of this study have revealed support for UTAUT model. The study results show support for hypothesis 1, 2, 3 and 4. This mean that performance expectancy, effort expectancy, social influence, and facilitating conditions had a positive impact on adoption of e-governance at 90% level of statistical significance. The study also revealed support for hypothesis 5, 6, and 7 that gender moderated adoption of e-governance at 90% level of confidence, however, the moderation was not statistically significant. The study also

revealed support for hypothesis 8, 9, and 10 that job experience moderated adoption of e-governance at 90% level of confidence, however, the moderation was not statistically significant There was no difference in adoption of e-governance services between men and women, and different levels of experience did not show any difference in adoption. Based on the study findings, in as much as the UTAUT model was established and adopted in developed countries; it can also explain the adoption of e-governance in developing country such as Kenya devolved County system of governance. The summary of regression finding are highlighted in table 4.15 below.

Table 4.8:Results of Regression Analysis -UTAUT Variables

Hypothesis	Dependent Variable	R^2	*F*Value	Independent Variable	Coefficient
H1	Adoption of e-governance	0.462	169.715**	Performance Expectancy	0.697**
H2	Adoption of e-governance	0.357	110.124**	Effort Expectancy	0.598**
H3	Adoption of e-governance	0.184	44.499**	Social Influence	0.428**
H4	Adoption of e-governance	0.578	217.360**	Facilitating Conditions	0.760**
H5	Adoption of e-governance	0.463	56.376**	Performance Expectancy	0.684**
				Gender	0.025
H6	Adoption of e-governance	0.362	37.130**	Effort Expectancy	0.599**
				Gender	0.063
H7	Adoption of e-governance	0.195	15.855**	Social Influence	0.446**
				Gender	0.108
H8	Adoption of e-governance	0.307	56.676**	Performance Expectancy	0.682**
				Job Experience	0.053
H9	Adoption of e-governance	0.383	40.472**	Effort Expectancy	0.587**
				Job Experience	0.037
H10	Adoption of e-governance	0.162	14.286*	Social Influence	0.283*
				Job Experience	0.028

***p <0.1*
**p <0.05*

4.9 Discussion of Results

Performance expectancy has three components namely efficiency, effectiveness, and quality, and is defined as the degree to which institutions, organizations or individuals believe that the use of a system will improve or enhance performance (Venkatesh et al.,

2003). The findings of this study confirmed hypothesis 1 that performance expectance influences job experience and adoption of e-governance; hence supports the UTAUT model (Venkatesh et al., 2003). However, the study did not find any significant moderating effect of gender, and job experience to support the influence of performance expectancyas per hypothesis 5 to 10. In the case for adoption of e-governance, Performance expectancy is theoretically derived from constructs such as outcome expectation, relative advantage as highlighted in the innovation diffusion technology (IDT). Therefore, the findings of this study supports literature (Settles, 2015; Venkatesh et al., 2003; Sarker et al., 2011). Venkatesh study had found that performance expectancy was higher in men that in women, however, this study has not established any difference in performance expectation between men and women, nor adoption based on those who are highly experienced and those who are not. Therefore, this study concludes that adoption of e-governance services is not different for men and women, and not dependent on level of job experience.

Effort expectancy was defined by Venkatesh et al., (2003) as the degree of ease that is usually associated with the use of a given system. The concept as advanced by Venkatesh., et al (2003) mirrors the concept of perceived ease of use in the TAM modes (Matavire et al., 2010; Davis et al., 1992; Sharma, 2007). This study finding revealed that effort expectancy influences adoption of e-governance, thus affirming hypothesis 2. This finding supports literature (Tomasza et al., 2007; carter & Belanger, 2012, Gupta et al., 2008; & Venkatesh et al., 2003). However, the study did not find any significant moderating effect of gender and job experience to support the influence of effort expectancy in adoption of e-governance as per hypothesis 6 and 9. The reason for lack of significant difference as a result of gender and job experience could be attributed to the fact that men and women working in Nairobi City County who responded to this study

had received similar ICT skills training, and work in similar work environment, and thus possessing similar work experiences.

Monga (2008) had defined social influence as the degree to which an individual perceives what his or her peers thinks about use of a system as important to the extent that it is able to change their belief and actions. Just like the previous variables, this study established that social influence positively affects adoption of e-governance as supported by hypothesis 3. However, the effect of gender, and job experienceas the moderating variables influencing adoption of e-governance was not significant and therefore did not support hypothesis 7 and 10. Social influence as depicted in the UTAUT model collaborates subjective representation in other models like the Theory of Reasoned Action (TRA), and the Theory of Planned Behavior (TPB) (Venkatesh et al., 2003). Therefore, the findings of this study concludes that social influence has significant effect on adoption of e-governance supports literature presented in this study (Monga, 2008; Sarker et al., 2011; Talukder & Quazi, 2011). This study did not establish significant difference between men and women and how their job experiences shape social influence and adoption of e-governance. The study concludes that men and women within the same social circles at Nairobi City County have similar job experiences and perception towards adoption of e-governance.

The findings of this study have indicated the existence of a strong positive and significant relationship between facilitating conditions and adoption of e-governance as supported by hypothesis 4. In this regard, facilitating conditions refer to degree to which an individual believes that there exists technical infrastructure to support adoption of e-governance (Venkatesh et al., 2003; Stanforth, 2012; Braa et el., 2004; & Reijswoud, 2008). This finding supports the UTAUT model as effective in measuring the extent to which facilitating conditions can be used to enhance adoption of e-governance (Venkatesh et al.,

2003, Stanforth, 2012; Braa et el., 2004; & Reijswoud, 2008) that suggests that as one get experience in the use of technology, the more they adopt the e-governance platforms to deliver or receive services.

4.10 Chapter Summary

This study has revealed that the strongest relationship existed between facilitating conditions and adoption of e-governance, r (0.760); $p \leq 0.01$; the relationship was statistically significant. The study also had a strong relationship between performance expectation and effort expectancy, r (0.725); $p \leq 0.01$, the relationship was statistically significant. This was followed by the relationship between performance expectancy and facilitating conditions, r (0.705); $p \leq 0.01$; the relationship was statistically significant. There also exists a statistically significant relationship between facilitating conditions and effort expectancy, r (0.683); $p \leq 0.01$. The relationship performance expectancy and adoption of e-governance, r (0.679); $p \leq 0.01$; the relationship was statistically significant. The study also established a positive relationship between effort expectancy and adoption of e-governance, $(0.598) \leq 0.0$. Therefore, all variables under this study revealed the existence of a statistically significant relationship with e-governance.

CHAPTER FIVE: SUMMARY, CONCLUSSIONS AND RECOMMENDATIONS

5.0 INTRODUCTION

This chapter presents conclusion and recommendation of the study. The conclusion is presented first, then the recommendations for improvement and for further studies.

5.1 Summary of the Findings

Adoption of e-governance in delivery of services is one of the ways in which public sector organizations can enhance efficiency and effectiveness in delivery of services. The establishment of devolved system of governance created 47 semi-autonomous County Governments mandated to provide governance services within their region. Studies have been conducted on adoption of e-governance in the devolved government structure, however, most of studies did not utilize the UTAUT model or moderating variables to determine e-governance adoption. Therefore, this study adopted the UTAUT model to examine performance expectance, effort expectancy, social influence, and facilitating condition in adoption of e-governance. The study used gender and job experience as moderating variables. The descriptive survey research design was. The study had a target population of 12, 946, and a sample size of 384. A questionnaire tool with questions adopted from UTAUT variables (performance expectance, effort expectancy, social influence, and facilitating conditions) was used. The study findings were analyzed for descriptive and inferential statistics. Inferential statistics were used to test the hypothesis of the study. The findings revealed the existence of a statistically significant relationship between performance expectancy, effort expectancy, social influence, and facilitating conditions. However, the moderating variables (gender and job experience) did not have significant relationship with adoption of e-governance

5.2 Conclusion

In conclusion, the findings of this study show that performance expectancy, effort expectancy, social influence and facilitating conditions have a significant positive impact on adoption of e-governance services in Kenya devolves system of governance. As such, this means that individuals and organizations will adopt e-governance to improve performance in delivery of services, ease of use of the devolved government systems and services, while at the same time, believe that their peers and colleagues want them to use e-governance. Equally, facilitating conditions such as fast internet infrastructure, computing platforms and software, and training and capacity building should be in place, and enhanced continually since facilitating conditions have a strong positive impact on adoption of e-government services.The findings of this study have confirmed that UTAUT is valid model essential in the adoption of e-governance in developing countries, and in devolved system of governance. As such, the UTAUT has made it possible to test performance expectancy, effort expectancy, social influence, and facilitating condition, all of which have been found to be statistically significant in e-governance adoption.

5.3 Recommendations

5.3.1 Recommendation for Policy and Practice

The following are recommendations for policy and practice based on the findings of this study:

I. On performance expectation, there is need for Nairobi City County to enhance efficiency in delivery of services, effectiveness in packaging and formulating the e-governance service, and ensuring that the quality of e-governance services is determined before roll out of e-governance services is implemented.

II. On effort expectation, there is need for Nairobi City County to establish digital kiosks within the county where residents can go get trained on various aspects of

e-governance services and how to access this services. This will enhance ease of use, which in turn, will enhance adoption rates for e-governance services

III. On social influence, Nairobi City County should profile influential people within the government employees, the business sector, and the community who can be used to champion the e-government services. Societies, and peers tend to emulate of to follow ideas pushed by people they respect and admire.

IV. On facilitating conditions, there is need for Nairobi City County to ensure that there is adequate ICT infrastructure within the County. This should include Wide Area Networks, Wifi Hot Spots, and Digital kiosks. There is need for Nairobi City County to ensure transparency and accountability in e-governance services through production of e-transaction receipts, correspondents logs, and timely feedback. This will not only enhance confidence in the e-governance system, but credibility that can enhance further adoption of e-governance services.

5.3.2 Recommendation for Further Research

This study was limited to the UTUAT Model. The study variables were limited to performance expectancy, effort expectancy, social influence, and facilitating conditions. Equally, the study mitigating variables were limited to gender, age, experience and voluntariness of use. These variables are not exhaustive in examine adoption of e-governance. Further studies should adopt ATUAT model, but use political climate, leadership, and level of education and other mitigation factors to examine adoption of e-governance services in the public sector.

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APPENDICES

APPENDIX A: COVER LETTER

P. O. Box 817, 00300

Nairobi

DATE

Dear Respondent,

RE: RESEARCH QUESTIONNAIRE

I am a graduate student pursuing a Master of Arts in Public Policy and Administration at Kenyatta University. I am currently undertaking a research on *"Adoption of E-Governance Strategies: A Case Study of Nairobi County".* This is a requirement in partial fulfilment of Master of Arts in Public Policy and Administration (MPPA). The purpose of this study will be to determine geopolitical and social structural influence of American counterterrorism interventionism in Kenya. This study will be guided by Kenyatta University rules and ethical regulations for research work. I will also observe utmost ethical standards in the process of conducting the research.

The study will be beneficial to respondents, the government, counterterrorism policy makers, NGO's, and other relevant stakeholders. I will kindly like to seek your permission to carry out this study. You have been selected randomly, and your comments will remain private and confidential.

Yours faithfully

Mulubi Asiligwa

APPENDIX B

RESEARCH QUESTIONNAIRE

SECTION I: DEMOGRAPHIC INFORMATION

*Kindly respond to the following questions by checking on the appropriate box (**X**)*

1. What is your gender?
   ( ) Male ( ) Female

2. How old are you?
   ( ) 18-25 ( ) 26-34 ( ) 35-54

   ( ) 55-64 ( ) 65 or over

3. What is your highest level of education?
   ( ) High School ( ) College ( ) University ( ) Post Graduate

4. Kindly (tick) your job description

County Sector Manager	☐
Executive Committee Member	☐
Public Service Board Member	☐
Governors Advisor	☐
County Health Officer	☐
County Accountant	☐
County Inspection Officer	☐
County Human Resource Officer	☐
County Program Officer	☐
General User of e-governance	☐

5. Kindly indicate the method you used to access e-governance as provided by Nairobi County

( ) Office Computer ( ) Mobile Phone ( ) Home Computer ( ) Tablet ( ) Computer at Cyber Cafe

6. What is your level of experience with e-governance?

Very little experience	☐
Little experience	☐
Moderate Experience	☐
Good Experience	☐
Very God Experience	☐

7. Have you ever been trained on how to use e-governance?

( ) Yes ( ) No

8. If you answered YES in the previous question, kindly indicate the training you received

Using Online forms	☐
Using Online Payments	☐
Filing Taxes	☐
Online Approvals for services	☐
Online correspondence	☐

Other (Specify)_____

SECTION II: E-Governance

(Kindly rate the following questions based on the following scale*: (1= Not at all; 2 = little extent; 3= Moderate extent 4 = Great Extent; 5 = Very great Extent)*

E-Governance statements	**1**	**2**	**3**	**4**	**5**
9. How do you understand how e-governance operates					
10. How do you use e-governance platforms					
11. To what extent do you believe that e-governance has reduced the cost of service delivery at Nairobi County					
12. To what extent do you believe that e-governance has improved efficiency of service delivery					
13. To what extent do you believe that e-governance has improved effectiveness of service delivery					

SECTION III: Extent to which E-Govrnance Enhances Performance Expectation

(Kindly rate the following questions based on the following scale*: (1= Not at all; 2 = little extent; 3= Moderate extent 4 = Great Extent; 5 = Very great Extent)*

Performance Expectation	**1**	**2**	**3**	**4**	**5**
9. You believe e-governance platforms have helped delivery of services					
10. You are satisfied with delivery of e-governance services					
11. You believe e-governance enhances efficient delivery of services					
12. You believe e-governance enhances effective delivery of services					
13. You believe e-governance enhances quality in delivery of services					
14. You believe e-governance improved communications					
15. You believe e-governance has reduced corruption					
16. You believe e-governance enhances performance					

SECTION IV: Extent to which Effort Expectancy Enhances Adoption of E-Governance

(Kindly rate the following questions based on the following scale*: (1= Not at all; 2 = little extent; 3= Moderate extent 4 = Great Extent; 5 = Very great Extent)*

Ease of Use	**1**	**2**	**3**	**4**	**5**
17. To what extent are e-governance platforms easy to use at Nairobi County					
18. To what extent has e-governance technology helped you deliver service of receive service from Nairobi County					
19. To what extent do errors in e-governance platforms get fixed, making it convenient to use the system at Nairobi County					
20. To what extent does information about Nairobi County services easily available on e-governance platforms					
21. To what extent is the e-governance information up to date					
22. To what extent are you frustrated using e-governance platforms at Nairobi County					

SECTION V: Extent to which Social Influence Affects Adoption of E-Governance

(Kindly rate the following questions based on the following scale*: (1= Not at all; 2 = little extent; 3= Moderate extent 4 = Great Extent; 5 = Very great Extent)*

Social Influence	**1**	**2**	**3**	**4**	**5**
23. To what extent do your colleagues and Nairobi residents expect better service using e-government platforms					
24. To what extent do your colleagues and Nairobi residents expect you can use e-governance efficiently					
25. To what extent do Nairobi residents believe that e-governance is essential to improving service delivery					
26. To what extent did your colleagues influence your adoption of e-governance services					
27. To what extent have you been trained on how to use e-governance platforms					
28. How does the culture of change at Nairobi County enhanced the adoption e-governance					

SECTION VI: Influence of Facilitating Conditions on Adoption of E-Governance

(Kindly rate the following questions based on the following scale*: (1= Not at all; 2 = little extent; 3= Moderate extent 4 = Great Extent; 5 = Very great Extent)*

Facilitating Conditions	**1**	**2**	**3**	**4**	**5**
29. To what extent do you think Nairobi County has adequate I.T infrastructure for adoption of e-governance					
30. How has I.T infrastructure enabled faster and quicker delivery of e-government services					
31. To what extent do you have enough resources required to access e-governance services at Nairobi County					
32. To what extent are e-governance services accessible on different platforms such as mobile phones, tables, computers					
33. To what extent has adoption of e-governance enhanced government accountability in delivery of services					
34. How has training of employees on e-governance facilitated adoption of e-governance at Nairobi County					
35. How has the training of Nairobi County residents facilitated adoption of e-governance at Nairobi County					
36. To what extent has government policies on the use of e-governance has enhanced adoption of e-governance services					

37. What are some of the other ways you think e-governance services can be enhanced at Nairobi County?

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THANK YOU FOR YOUR TIME & PARTICIPATION