

**FACTORS AFFECTING THE ADOPTION OF E-GOVERNMENT IN COUNTY
GOVERNMENTS: THE CASE OF NAROK COUNTY**

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DECLARATION

I declare that this is my original work and has not been presented for a degree in any other university.

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God bless you all.

DEDICATION

This research project is dedicated to my family (my husband Ben Ole Tina, Kids; Yiamat, Masei and Sereyian Tina) for their inspiration, encouragement, understanding and prayers towards the successful completion of this course.

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ABSTRACT

As new processes in information and communication technologies (ICT) develop and the advancement in the in digital connectivity, national and local governments are reassessing the way they work and interact both internally and with external organizations. This technology advancement has encouraged the government's organizations and affiliations to reconsider their internal and external relations and transactions. In order to succeed and build for the future, the administrative processes of governments are being transferred to electronic systems. Therefore, governments worldwide are considering establishing an electronic approach to government organizations and agencies in order to provide and facilitate many services to people anywhere and at any time, and to replace traditional routine procedures. The study sought to establish factors affecting the adoption of e-Government in Narok county governments. The main research instrument was an interview guide and the study adopted a case study research design whereby the target interviewees were five employees of the county that consisted of senior and middle level management. The findings of the study were that unlike the National government, Narok County has been slow in embracing technology based transactions and only one function related to the gate collection from the Masai Mara National park had been fully automated by an Agent that was subcontracted to collect revenue. In addition, the lack of advanced and secure technical infrastructure was one of the main reasons why the county is hesitant to fully adopt e-Government. Issues such as systems integration, inadequacy of bandwidth, were found to be other factors affecting the offering e-Government services in the county. Therefore, for effective implementation of the e-Government strategy there is need for the county to restructure existing organizational models, roles, responsibilities, training, and employees' needs. Training of employees' lead to successful implementation of e-Government and a lack of adequate training was found resulted in a significant challenge in the adoption of e-Government. The study recommends that the transformation to e-Government services should be treated as a reform and restructuring process, and not merely the computerization of government operations. Therefore for efficient rolling over of the system, the county should borrow ideas from other regions or counties that have successfully implemented similar e-Government projects.

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LIST OF ABBREVIATIONS

ICT	-	Information Communication Technology
CoK	-	Constitution of Kenya
Cap	-	Chapter
CSF	-	Critical Success Factors
TAM	-	Technology Acceptance Model
UTAUT	-	Unified Theory of Acceptance Use of Technology
PE	-	Performance Expectancy
EE	-	Effort Expectancy
NOFBI	-	National Optic Fiber Backbone Infrastructure
IT	-	Information Technology
GPay	-	Government Pay
IFMIS	-	Integrated Financial Management Information System
IPPD	-	Integrated Personnel Payroll Data
CBK	-	Central Bank of Kenya

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

In the present business environment, the modernization of public services through the adoption of Information and Communication Technologies is in progress. Consequently, National and County Governments have been making significant attempts to make their services and information available on the Internet which has necessitated development of appropriate interaction mechanisms between the government and members of the public. This is in recognition that the success of these efforts depends, to a great extent; on how well the targeted users for such services, citizens in general, make use of them (Serenko & Bontis, 2004). The resulting benefits from the adoption of e-Government services can be diverse and long lasting such as, among others, less corruption, increased transparency, better delivery of government services to citizens, improved interactions with business and industry, greater convenience, citizen empowerment through access to information, growth of revenues, cost reductions, and more efficient government management, among others (Gefen & Straub, 2000). Indeed, a growing number of the world's public decision makers have successfully implemented e-Government strategies to spur innovation and 'to shift from expensive face to face, telephone-based and paper based relationships with individuals, businesses, voluntary sector organisations, and other government organisations, to more cost efficient 'e'solutions' (Gefen., Karahanna, & Straub 2003).

According to Trinkle (2010) with the adoption of e-Government, government agencies realize cost reductions and improved efficiency, while citizens receive faster, more convenient services. In light of these benefits, e-Government is expected to grow in the present day business environment and this can be witnessed in the developed countries where the benefits of e – government have been realized. In the US for example, James (2011) points that there were predictions of more than \$870 billion of government fees and taxes to be processed through the web by 2013. While there seems to be substantial growth in the development of e-Government initiatives, it is not clear whether citizens will embrace those services. The success and acceptance of e-Government initiatives, such as online voting and license renewal, are contingent upon citizens' willingness to adopt these services. Numerous studies have analysed user adoption of e-commerce (McKnight *et al.*, 2009).

Several factors have been identified as influencing the e-Government success in the local and national government. Bof & Previtali (2009) have identified these factors to include the availability of managerial and technical competency in the government unit concerned as well as adequacy of suppliers with IT solutions and the availability of IT infrastructure. The adoption of e-Government in a government unit will be affected by government commitment to the same and the perceived improvement to the delivery of service. The migration of government functions to the Internet had a profound impact on reducing the prevalent corruption in public procurements (Panda & Sahu, 2010). Research has indicated that the cost benefit was the main driver for local government to implement e-Government systems.

1.1.1 E-Government

Broadly defined, e-Government includes the use of all ICTs, from fax machines to wireless palm pilots, to facilitate the daily administration of government. “e-Government refers to the delivery of Government information and services online through the internet or other digital means” (Muir & Oppenheim 2002). However, like e-commerce, the popular interpretation of e-Government is one that defines it exclusively as an Internet driven activity... to which it may be added “that improves citizen access to government information, services and expertise to ensure citizen participation in, and satisfaction with the government process ... it is a permanent commitment by government to improving the relationship between the private citizen and the public sector through enhanced, cost-effective and efficient delivery of services, information and knowledge. (Van Slyke *et al*, 2004).

It is commonly accepted that information infrastructures such as e-Government systems have become increasingly connected and embedded with other infrastructures to initiate the growth of enterprises (Vaast & Walsham, 2009). In line with this notion, the usage of information technology in e-Government systems is considered to be an innovation strategy action. In the field of e-Government it has been emphasized that an important goal of e- Government is the delivery of faster and cheaper services and information to citizens, business partners, employees, other agencies, and government. The adoption of e-Government processes is a critical component in the creation of an efficient and responsive New Public Management. With widespread adoption of electronic interactions throughout national and local government agencies, a process of reengineering can ensure

a ‘fundamentally different sort of government that provides much more value to citizens’ (Leigh & Atkinson 2001). This will help reinforce a customer-focused government that will transmit to the offline world as well. According McKnight *et al.*, (2009), the aggregate e-Government intervention has three main effects. First, it produces savings in the provision of services to citizens and to firms. Second, it increases private-sector employment by facilitating economic activities and favoring participation in the labour market. Third, it improves the prevailing technology that influences the production process by providing a ‘connected environment’. They further observe that the aggregate-Government impact takes time to be effective, reflecting not only the timeframe needed to complete technical projects, but also the various types of organisational learning processes that the staff of the public administrations have to undergo.

1.1.2 Benefits of E-Government Usage

Research indicates that e-Government leads to reduction in lead time and cost of offering services and enhanced transparency (Bof & Previtali, 2010). Some of the benefits of e-Government are at the strategic level, such as fraud prevention and government reputation, and are highly intangible, but have a significant impact on an organization and its future (Piotrowicz & Irani, 2009). To adopt e-Government processes, citizens must have the intention to ‘engage in e-Government’, which encompasses the intentions to receive information, to provide information and to request e-Government services. Will citizens exchange information electronically given the choice between an online process and a traditional method?

Perceptions of trustworthiness could impact citizens' intention to use state e-Government services. Bélanger *et al.*, (2009) define trustworthiness as 'the perception of confidence in the electronic marketer's reliability and integrity'. Warkentin et al (2002) propose a conceptual model of e-Government adoption with citizens trust as the underlying catalyst for adoption. Other variables in his conceptual model that he proposes are perceived risk (fear of losing personal information and fear of being monitored on the internet), perceived behavioural control, perceived usefulness (system's utility to the user), perceived ease of use and cultural variables.

Citizens must have confidence in both the government and the enabling technologies. According to the Hart–Teeter national survey reported by GAO (2004), Americans believe that e-Government has the potential to improve the way government operates, but that they have 'concerns about sharing personal information with the government over the internet, fearing that the data will be misused and their privacy diminished' (GAO, 2001).

1.1.3 Narok County

The promulgation of the Constitution of Kenya 2010 (CoK 2010) on 27 August 2010 paved way for realization of two levels of governance. Chapter Eleven (Cap 11) of CoK 2010 – Devolved Government specifically provides for the setting up of the County Governments. This involved transferring of selected functions and resources from the central authority to the lowest feasible structure through the 47 Counties listed on the First Schedule of CoK 2010. Each of these Counties form the County Governments comprising of the County Assemblies (State powers of legislature – law making), County

Executives (Implementing the Laws and Policies), County Public Service Board (CPSB – the employing board) and relevant Boards.

Narok County is situated in Kenya along the Great Rift Valley. It is named after, Enkare Narok, the river flowing through Narok town. It covers an area of 17,944 sq km and has a population of 850,920. The temperature range is 12 to 28 Degrees Celsius and the average rainfall range of 500 to 1,800 mm per annum. The Maasai Mara National Reserve, an important tourist destination, is located in Narok County. It is home to the Great Wildebeest Migration which is one of the “Seven New Wonders of the World”. It constitutes 6 sub-counties namely: Kilgoris, Narok North, Narok South, Narok East, Narok West and Emurua Dikirr. Narok town is the capital and Head Quarters of the Narok County and stands as the major center of commerce in the county.

The County is marked as one of the fundamental counties for achieving the economic pillar in vision 2030. The key contributors being: Tourisms; wildlife, cultural, and natural forests. Crop farming; wheat, barley, maize, sugarcane, potatoes and tomatoes. Livestock farming; cattle’s, sheep’s and goats. Mining; gold, sand and stone quarry.

The County Sources of revenue includes the; local revenue; mainly from Tourism, and other sources like Cess, Plot rents/rates, Business Permits and Revenue from National Government. Based on 2014-2015 budget, the revenue expected was 7.2 Billion. 4Billion coming from National Government while the rest from Local revenues. This therefore calls for efficient and effective service delivery thus the need to move services online and promotion of digital inclusion.

The County has Ten Departments/Ministries namely. The departments are headed by Executive Committee Members assisted by Chief Officers. The department's headquarters are in Narok Town, while their sections distributed across the six sub counties. Currently, only the County headquarters, Lands and Health offices have Local Area Network (LAN). The county headquarter has internet terminated by the national government to facilitate access to IFMIS/GPay at treasury. The remaining departments and sub county offices have no LAN or internet connectivity. They rely mainly on modems to access internet. The only available telephone system is an internal at the county headquarters also installed by the national government. External communication to the county is by email. The only systems available are IFMIS-Integrated Financial Management Information System, G-Pay, and IPPD-Integrated Personnel Payroll Database, all installed by the national government.

1.2 Research Problem

In today's dynamic global competitive business environment, technology-based service is no longer an afterthought; rather it is a must for public and private organizations. It has become necessary for companies to provide their customers with cost-effective total solution and better customer satisfaction with innovative ideas and methods. Especially with the emergence of ICT, companies are forced to shift their operation from the traditional style to e-business, e-procurement and e-supply chain philosophy in order to sustain themselves (Lee *et al.*, 2001). Srivastava & Teo (2005) demonstrate that facilitating a number of online government services for businesses increases their use of ICT and the Internet. Thus, the use of ICT by governments propels its usage in the

business scenario. In addition to increasing governmental efficiency, e-Government may serve to increase the business usage of IT and the internet in the form of increased e-business activity, thereby facilitating an increase in its national economic performance (Piotrowicz & Irani, 2009).

The implementation of devolution of services by the Government has seen County governments inherit a lot of debt, poor revenue collection and ineffective service delivery mechanisms from the previous councils and thus in order to improve service delivery, most county governments have implemented e-Government in order to ensure that there faster and cheaper services and information to citizens, business partners, employees, other agencies, and government. This enables the counties to increase the participation of citizens in order to enrich the development process and the public e-Services which is expected to reduce conflict between the government and the locals who have been complaining of being sidelined by the government in key decision making. (Waithaka et al., 2013).

With the Kenyan government being in two tiers, it has been now almost three years since the adoption of the county government and this need to be evaluated about whether it has been able to improve the quality of services at the local level through the adoption of e-Government.

Several researches have already been carried out in the area of critical success factors influencing the implementation of e-Government process in public institutions. AlAwadhi & Morris (2010) conducted a study in Kuwait to explore factors that affect the adoption of E-Government services. The result identified the main factors that could

influence citizens to adopt E-Government including usefulness, ease of use, cultural and social influences, face-to-face interaction, gender issues, technical issues, lack of awareness, trust in the internet and cultural differences. Vishanth *et al.*,(2011) in a study on the complexities of e-Government implementation and diffusion in a developing country found that it is necessary for the involvement of government agencies to contribute their data to meet users' needs of e-Government services. However, these studies are limited in scope because they were conducted in different national culture. According to Azadegan (2008), the faster pace of technological evolution has made adoption of new technologies, such as those used for electronic government, a common practice. But not all firms uniformly adopt all technologies. This difference in adoption of e-Government system is, among other things, influenced by national culture.

Other studies that have been undertaken include Obonyo (2011) undertook a study on Socio-Economic, Technological and Communication factors influencing the adoption and use of E-Government services at the Ministry of Finance and found out that socio-economic factors and technological factor and the level of awareness of e-Government services had a major influence in the adoption of e-Government services. Nzioka (2013) researched on a survey of information and communication technology skills appropriateness at the directorate of e-Government in Kenya and established that the directorate identified core skills required for a specific role of the government at all times; the IT skills-sets were effective in equipping the staff with the necessary skills required in different places of work; and that the IT skills-sets were being adequately utilized by the staff in their current employment. Prior studies on e-Government adoption

have focused researched on factors influencing adoption by the “user’s” but lack perspective from County government. The success of e-Government efforts depends on how well the targeted users for such services, citizens in general, make use of them. With introduction of two level of government, research on factors influencing adoption of e-Government by county governments would be very useful. This study attempts to fill this gap and answer the question; what are the factors affecting the adoption of e-Government by Narok County?

1.3 Research Objectives

1.3.1 Objective of the study

The main objective of the study was to establish the factors affecting the adoption of e-Government by Narok County

1.3.2 Specific objectives

- i) To establish extent of e-Government application by Narok County.
- ii) To establish the factors influencing the adoption of e-Government by Narok County
- iii) Benefits and challenges of e-Government adoption.

1.4 Value of the Study

The study findings will benefit management and staff of Narok County who will gain insight into how their county government can effectively adapt and manage e-Government to improve their service delivery and performance. This study will offer an understanding on the importance of adopting an efficient government system and thus offer competitiveness to the operations of the county. Several practices on e-Government

and their effects will be discussed for the benefit of the top management. This is because government institutions, both at the national and county government need to adapt to the changing needs of the current business set up and requirement of various customers and providers of services. As a result, institutions in the county and other affiliated institution will derive great benefit from the study.

Secondly, the literature indicates the constant nature of critical success factors of e-Government practices but earlier studies indicate that the factors influencing the success of e-Government in an organization changes through the lifecycle of project implementation. Therefore, further studies are needed to test the impact of CSFs on a particular stage of project implementation. This research will contribute to the literature on the e-Government practices in firms especially in developing countries like Kenya.

The study will also be valuable to the academicians who will find benefit in establishing the factors that hinder the adoption of e-Government and from the same findings determine further research gaps that can be useful in furtherance of policies on e-Governments adoption.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this chapter literature of relevance to the study was reviewed. Key areas of literature that took center stage in this section include the factors affecting e-Government adoption and service delivery. The study further put into context service delivery and theoretical framework. Empirical studies, research gap and conceptual framework were equally reviewed.

2.2 Theories of Technology Adoption and E-Government

A theoretical framework refers to how the researcher or writer of the report not only questions, but ponders and develops thoughts or theories on what the possible answers could be, then these thoughts and theories are grouped together into themes that frame the subject (Neuman, 2010). It is the process of identifying a core set of connectors within a topic and showing how they fit together. This study will be guided by a number of theories as discussed subsequently.

2.2.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is an information systems theory that models how users come to accept and use a technology (Wikipedia). Broadly, TAM posits that the intensity of an individual's intention to use a technology can be explained jointly by his or her perception about the technology's usefulness and attitude towards the technology use (Chau & Hu, 2001). The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when

they will use it, notably: Perceived usefulness (PU) and Perceived ease-of-use (PEOU) (Davis, 1989). TAM follows the thread of belief-intention-behavior. (Ajzen, 1991). TAM was developed in the setting of IS usage within organizational boundaries, where availability of technological resources, training, IS experience, and the expertise of users are homogenous to some extent; whereas, in a tax-filing setting, not everyone has an equal opportunity or adequate expertise to use information system (Fu, et. al., 2004).

The goal of TAM is to provide an explanation of the determinants of computer acceptance that is in general capable of explaining user behavior across a broad range of end-user computing technologies and user populations, while at the same time being both parsimonious and theoretically justified. But because it incorporates findings accumulated from over a decade of IS research, it may be especially well suited for modeling computer acceptance (Kumar *et al.*, 2007). On the basis of this theory, when the county government develops an IT based system that will help improvement of service delivery, they need to incorporate in the system features that will be appealing to the users. The system should also be easy to use and devoid of complicated terminologies that will confuse the user. Thus even if a National government comes up with a good technology based platform in which it intends to offer its services through, without acceptance of the same by the Counties/Users, the same initiative will not achieve its intended objective. Good example is currently E-Procurement introduced by National Government and getting a lot of resistance from the County Governments. This is the basis of the technology acceptance theory.

2.2.2 Unified Theory of Acceptance Use of Technology

Unified Theory of Acceptance Use of Technology or UTAUT is a theoretical model used in information systems research. UTAUT resulting from research that carried out by Venkatesh et al., (2003). According to Venkatesh et al. (2003), UTAUT is produced due difficulties for researchers to choose a variety of available models to use. Basically, the UTAUT results from eight of the revised model, the Theory of Reasoned Action, the Technology Acceptance Model, the Motivational Model, the Theory of Planned Behavior, a model combining the Technology Acceptance Model and the Theory of Planned Behavior, the Model of PC Utilization, the Innovation Diffusion Theory and the Social Cognitive Theory. In addition, the UTAUT also explained up to 70 percent of the variance has a desire to use technology, surpassing the previous model (Venkatesh *et al.*, 2003). These include demographic factors that have been ignored in other models such as age and gender. The UTAUT helps managers assess the likelihood (probability) of success for new technologies as well as understand the drivers of technology acceptance. The UTAUT has four predictors of behavioral intention or usage - performance expectancy, effort expectancy, social influence and facilitating conditions. The predictors are defined as follows (Venkatesh et al., 2003).

Performance expectancy (PE) in the UTAUT model was derived from a combination of five similar constructs including perceived usefulness, extrinsic motivation, job-fit, relative advantage and outcome expectations. Performance expectancy is the strongest predictor of intention within each of the individual models reviewed and was found significant at all points for both voluntary and mandatory settings in Venkatesh *et al.*,

(2003) model-validation. In the UTAUT model also, effort expectancy (EE) captures the notions of perceived ease of use and complexity. In validation of the UTAUT, EE was significant in both voluntary and mandatory usage contexts, although only for the first period of usage. Since practice increases one's comfort with software, effort-oriented constructs logically would become less salient after learning hurdles are overcome (Payne *et al.*, 2008).

The study will adopt the UTUAT model should now as a yardstick for the technology adoptability studies because it captures user perceptions in a more comprehensive and pragmatic way than previous ones. The implication of the theory is that whenever the government unit plans to introduce a system that will need to be accepted by the users, it needs to consider the perceived usefulness of the system by the users before rolling out the same. In addition, the government should consider the job-fit and the relative advantage of the system to users as well as the expected outcome. This theory outlines the need to consider these factors before introducing any system to the Counties or in the County. This implies further that there need to be a partnership between the National Government, County Governments and all the stakeholders and the views of the users will need to be considered and inputted in the final product.

2.3 E-Government and its benefits

“e-Government refers to the delivery of [government] information and services online through the Internet or other digital means” (Muir & Oppenheim, 2002). It is about delivering improved services to citizens, businesses, and other members of the society

through drastically changing the way governments manage information Accenture, (2002). From the point of view of citizens, e-Government offers a number of potential benefits. It offers more control on how and when they interact with the government. Instead of visiting a department at a particular location or calling the government personnel at a particular time specified by the government, citizens can choose to receive these services at the time and place of their choice. Technology now makes it possible to personalize a website to a point where delivery of services could be tailored to meet the specific needs of an individual, thereby increasing the satisfaction of citizens from government services (Gilber & Balestrini, 2004).

Bhatnagar (2004) describes the benefits of e-Government systems as being focused on reducing corruption in administration and increasing transparency, which would improve the effectiveness and efficiency of government services. It helps to make counties more open, more accountable, more inclusive and better able to lead their communities. He also explained that improving government's service delivery was as important as improving the performance of public services. Nkwe (2012) also argues that e-Government can empower citizens to overcome the digital divide, reduce intermediaries and reduce costs.

Warkentin et al. (2002) explains these benefits by giving the example of the Internal Revenue Service in the US that reduced its costs for printing, sorting and posting tax forms by adopting a website for tax services and made savings of millions of dollars each year. Chavez (2003) also explains that by reducing transportation fuel, paper and pencils, e-Government has made an effective contribution to a greener environment.

According to Ndou (2004), by reducing human errors, cost reductions could be achieved and by streamlining internal processes, efficiency could be improved. In addition, the quality of service delivery could be improved with regard to accessibility, content and wasted time by transactions that were convenient and fast. Roberts & Barrar (2012) argue that the openness and transparency of government would be enhanced if government website made their legislation, role and standards accessible to citizens, which could increase accountability and reduce corruption.

2.4 Factors affecting E-Government adoption

Adopting new technology is required to success in implementing e-Government in developing countries, Kenya, for insistence [8]. The success of the implementation of the e-Government is dependent not only on the government. A popular model for implementing the e-Government is the diffusion innovation process Roger, (1995). An innovation is an idea, practice, or object that is perceived to be new by an individual or other unit of adoption. The Innovation-Decision Process Model suggests that the adoption of an innovation is not a single act, but a process that occurs over time. Potential adopters go through five stages when interacting with an innovation. The first stage is knowledge in which potential adopters find out about an innovation and gain a basic understanding of what it is and how it works. The second stage is persuasion in which potential adopters form a positive or negative impression of the innovation. It is only in the third stage decision, that the innovation is actually adopted or rejected. The fourth stage, implementation, occurs when the innovation is actually used. In the fifth stage,

confirmation, the adopter seeks information about the innovation and either continues or discontinues use of the innovation.

The adoption of e-Government is affected by several factors which include;

2.4.1 Lack of ICT Infrastructure

IT infrastructure is one of the significant factors which make changes in the Information System (IS) issues. IT enhance and speed up the adoption of e-Government, in the sense of utilizing technology to save time and effort through collaborating, cooperating and contributing with government agencies because the IT lies behind the success of e-Government adoption (Macasio, 2009). The infrastructure holds up the performance, data transformation, and storage which are necessary in the e-Government services. Hence, IT infrastructure should be prepared before e-Government services can be available consistently and effectively (Ebrahim & Irani, 2005). E-Government cannot be achieved without the availability of telecommunications infrastructure

IT can help government public sectors to increase productivity and performance, improve policy-making, and provide better public services to the citizens (Akbulut, 2002). Moreover, there is an opportunity to derive productivity and business benefits from an intelligent IT infrastructure built on the pervasive computing paradigm. Furthermore, there is a need to protect investments already made in the existing IT infrastructure (Gupta & Moitra, 2004). Developing e-Government system based on the IT infrastructure which has played as a bedrock role. Internet allows access to multiple services, as a foundation to support the digital broadcast systems to apply a global digital network. It is a government's responsibility to determine the quality and quantity of the

telecommunications networks to handle the new traffic resulting from the use of these new services' level of service quality. (Wanga, Caob, Leckie & Zhang, 2004).

The Ministry of ICT and ICT Authority has a mandate to ensure ICT infrastructure development in the country is in line with Vision 2030. Currently phase one of the National Optic Fiber Backbone Infrastructure (NOFBI) has been completed only in major towns in Kenya. In this regard, counties where the telecommunication infrastructure has not been developed, tend to adapt e-Government services more slowly than counties where the infrastructure is highly developed. IT infrastructure provides the foundation for establishing the services in e-Government adoption. IT developments make possible the adoption of e-Government and heighten the quality and the delivery of efficient services as well (Bwalya. *et al.*, 2011).

Kumar *et al.*, (2007) noted that e-Government adoption is affected by website design. The ICT Authority has developed standards that must be adhered to when it comes to website development and other ICT projects. Management should understand perceived usefulness of developing Infrastructure as a basic component in provision of ICT services.

2.4.2 Computer and information literacy of management and users

The computer and information literacy are affected by the users level of education, age and gender, which all bar the organization to adopt e-Government services (Macasio, 2009). People, who have grown up among educated family and have got use to technology, have a highly chance to adopt a new technology. Technical staffs who have a rich knowledge in the ICT industry easily market their ideas to top management and vice

versa. They will not view automation as a threat of replacing them, thus little resistance. Education has been described as one of the problems related to e-Government adoption, suggesting that as people education rises, their knowledge in using the internet increases (Jaeger, 2007) thus better perceived ease of use and less complexity. The most frequent use of e-Government information and services comes from populations who are experienced in using the internet as a technology.

The availability of resources, together with knowledge of the technology are primary factors that influence the adoption of e-Government, because managers will adhere to traditional government ways of operations unless they are enlightened on new technologies provided with the correct resources and knowledge to implement these technologies. These factors are referred to as computer self efficacy and facilitating condition by Huang et al. (2006), who consider them to be the primary determinates of online tax filing and payment system adoption in Taiwan. Computer self-efficacy is considered by Wangpipatwong *et al.*, (2008) as a fundamental factor that affects the adoption of e-Government.

2.4.3 Top Management Support

Widespread organizational support and acceptance from the top management are key to the success of any new technology. Top Management is defined as not only the president and chief executive officer, but also all managers who have the authority to establish and enforce policies and guidelines Cavaness & Manoochehri, (2013). The top management support shows it as the positive commitment, enthusiasm and support of senior management for the project. The top management is the permission of the person, or

group of people, who directs and controls the highest level of organization. Top management support is necessary during the implementation. The project must receive approval from top management with strategic business goals (Sumner, 2009). In the case of the County, Top management is the Executive which composes of the Governor, Deputy Governor and Executive Committee members who have the authority to identify projects to be implemented in the county.

Top management support is one of the important and critical success factors for e-Government adoption. Top management needs to publicly and explicitly identify the project as a top priority (Wee, 2010). Senior management must be committed with its own involvement and willingness to allocate valuable resources to the implementation effort (Holland *et al.*, 2009). This involves providing the needed people for the implementation and giving an appropriate amount of time to get the job done (Roberts & Barrar, 2012). e-Government has shown a lot of maturity in Canada which currently is considered the most developed country in as far as implementing e-Government is concerned. This is because the Canadian government has committed to shaping itself as the government mostly connected to its citizens (Kumar *et al.*, 2007). If Top management views ICT as an enabler to success, they will support it.

2.4.4 Financial Constraints

According to Okiy (2005), "The importance of funding in providing excellent service cannot be over emphasized. It is the glue that holds the building, collections and staff together and allows attaining goals". Clearly, funding is the factor which promotes the success of e-Government. Lack of funding in a project is certainly a disincentive,

especially when adopting an innovation means that individuals must go through a learning curve and take on new responsibilities as a result of developing expertise (Sherry, 2003). Financial savings to governments through applying e-service will occur just from the medium-to-long term. Initial start-up costs will be high, in the short term, especially for parallel manual e-Government system for any length of time. e-Government failures is mainly related to lack of funding (Akomode et al., 2002). In the US, lack of financial resources as a barrier to applying e-Government for over half (57.1%) of city and county governments (ICMA, 2002). Funding was as the greatest obstacle to moving county government services to the Online services by 70% of the respondents (NACO, 2000). Canadian Government has succeeded in e-Government due to heavy financial investment.

2.4.5 External Pressures

The organization management can be affected by external pressures. These are considered as outdoor elements/limitations that influence business objectives. These can be; government policies, legislation, trade agreements, industry associations, competitors, local communities and media (Hosni & Khallil, 2004). Accordingly, the external pressures which are also external limitations affecting the management of the technical factors from outside the county could be caused by the citizens, other counties, or national government as well as the non-governmental organizations. E-Government Strategy guides e-Government implementation which can be constrained by the lack of clear government ICT policies.

2.5 Empirical studies

According to Alshehri *et al.*, (2012), the efforts of all countries, especially developing countries, are still affected by a lack of infrastructure, awareness, human resource capacity, technical skills, inexpensive technology, and effective government regulation.

Basamh, Qudaih & Suhaimi (2011) explored the adoption and implementation of e-Government in Saudi Arabia. The study identified infrastructure costs, computer literacy, privacy issues, accessibility, availability, and trust issues as some of the major challenges and obstacles that impede the implementation and adoption of e-Government in the Kingdom of Saudi Arabia. Costs associated with the implementation of e-Government negatively affect the e-readiness of various government departments for e-Government. Overall, the study has clearly found out that the challenges affecting the implementation and adoption of e-Government is not only related to the various government agencies, but they are also related to those using the e-Government services such as citizens and government employees.

Sang, Lee & Lee (2009) have studied factors and challenges to the implementation of e-Government in Cambodia. They explored the challenges critical to implementing e-Government include variations in support among leadership, the lack of high prioritization of (or even need for) e-Government at present, a poor ICT infrastructure, a low rate of literacy, and a high turnover rate among government information technology staff.

Bwalya (2009) has examined factors affecting adoption of e-Government in Zambia. The findings of the study revealed that lack of adequate ICT infrastructure, provision of content in English other than local languages, lack of proper change management procedures, non-contextualization of e-Government practices; contribute much to the delay in appropriate e-Government adoption in Zambia.

2.6 Research Gap

Despite the huge determination of many governments the world over in implementing e-Government and the acclaim that e-Government has finally won, previous studies present mixed cases (failure or success) of implementing and adopting e-Government into the socio-economic setup. The majority of the reviewed literature that discusses e-Government has been critical of the implementation and diffusion challenges facing e-Government in developing countries, in general. The challenges encountered however depend with how the process is being implemented and thus the need to look at how the government of Kenya has undertaken e-Government and the factors that affects its uptake by the counties.

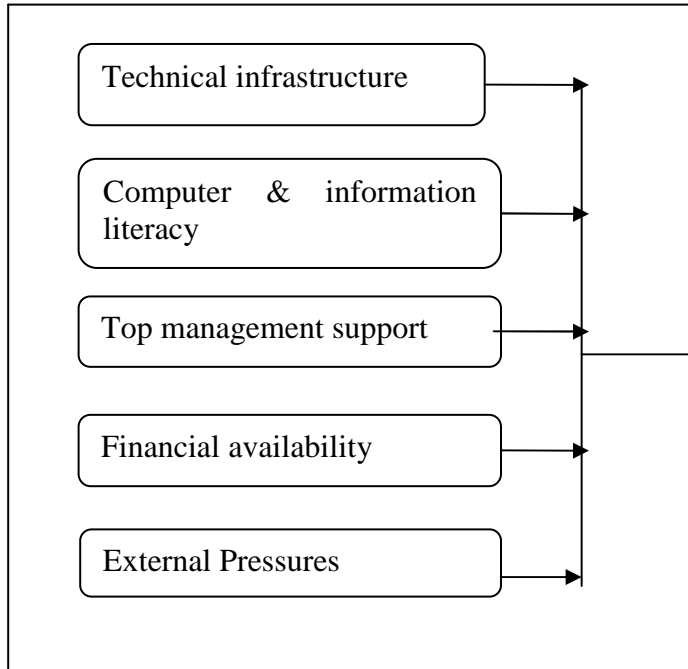
2.7 Conceptual Framework

A conceptual framework forms a simplified familiar structure, which is meant to help gain insight into a phenomenon that one needs to explain (Orodho, 2009). Conceptual research is that related to some abstract ideas or theory. It is generally used by philosophers and thinkers to develop new concepts or to reinterpret existing ones, the conceptual literature concerning the concepts and theories and explain how the variables relate (Kothari, 2004). Based upon on the model and theories of technology acceptance

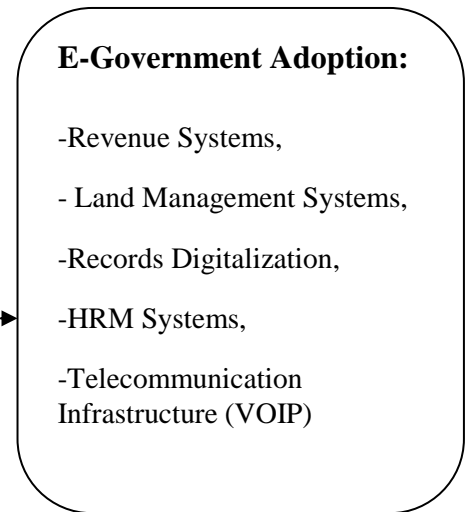
discussed previously, as well as relying upon the core model of UTAUT, the following conceptual model is developed.

Figure 2.1: Conceptual Framework

Independent Variables



Dependent Variable



CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter describes the proposed research design that was used and includes the research design, the target population, sampling design, data collection instruments and procedures, and the techniques for data analysis.

3.2 Research Design

A research design is a plan or blueprint of how a person intends to conduct his/her research (Babbie and Mouton, 2004). This study was based upon the premise that devolved government, in order to improve their performance, will need to adopt IT based applications in their day-to-day operations and one of these is the employment of e-Government. As a result, the adopted research design was a case study. A case study is an in-depth investigation of an individual, institution or phenomenon. Orina (2013) successfully used a case study in her research.

Case studies are particularly popular in organizational research and are well suited to capturing the social world of people in understanding a real life situation (Babbie and Mouton, 2004). Case studies allow a researcher to collect in-depth information, more depth than in cross-sectional studies with the intention of understanding situations or phenomenon. It also helps to reveal the multiplicity of factors, which have interacted to produce the unique character of the entity that is subject of study. The reason for this choice is based on the knowledge that case studies are the most appropriate for examining

the processes by which events unfold, as well as exploring causal relationships and also they provide a holistic understanding of the phenomena.

3.3 Data Collection

The study use primary data which was collected through the use of an interview guide. The respondents were interviewed were the Executive Committee Member incharge of ICT/Chief Officer ICT, Director ICT, senior ICT Technical staff, Head of Human Resources, Head of Finance. These are considered to be key informants for this research. Key informants are also a source of information that can assist in understanding the context of an organization, or clarifying particular issues or problems.

3.4 Data Analysis

The data collected was analyzed using content analysis. Content analysis is the systematic qualitative description of the composition of the objects or materials of the study (Hsieh and Shannon, 2005). It involves observation and detailed description of objects, items or things that comprise the object of study. Content analysis, as a class of methods at the intersection of the qualitative and quantitative traditions, is used for rigorous exploration of many important but difficult-to-study issues of interest to management researchers (Carley, 2003). This approach is considered more appropriate for the study because it allowed for deep, sense, detailed accounts in changing conditions. Thus the qualitative method was suitable for this research because it was conducted within the environment where the implementation initiatives occur. The analysis was guided by the themes in the conceptual framework.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

The research objective was to establish the factors affecting the adoption of e-Government in county governments at the Narok by determining its practices and challenges. This chapter presents the analysis and findings with regard to the objective and discussion of the same.

4.2 Background Information on the interview

This part of the interview guide was intended to assess the capacity of the interviewees to answer the questions on the interview guide and also whether they are versed with the concept of e-Government and its implementation in the county. The questions information sought were the current position, the length of time they have been working in the county and also their level of education and professional qualification.

The researcher by the nature of the research topic was biased towards interviewees that work in the ICT department of the county or are involved in the implementation of the e-Government. Consequently, the interviewees were; the CEC finance & ICT/CO ICT & E-Government, Director ICT & E-Government, ICT officer (senior technical office), Principal human manager, Deputy Chief Finance Officer and the Senior Network administrator. In total; the researcher interviewed all the five targeted respondents. All the respondents interviewed had university degrees with three of them having a Masters degree as well. The interviewees had different educational backgrounds that ranged from,

Finance, Information technology and human resources. The work experience for the respondents in the county was less than 3 years and this is explained by ranged from two to fourteen years both within the organization and without. However, the interviewees had previous worked in other sectors both in the public and private sector. With this solid background, both academically and work experience, it was felt that the respondents were knowledgeable enough on the research subject matter and thus of help in the realization of the research objective.

INTERVIWEE	CODE
CEC Finance & ICT	Respondent 1
ICT Director	Respondent 2
Senior ICT Officer	Respondent 3
Principal Human Resource Officer	Respondent 4
Network Administrator	Respondent 5

4.3 E-Government Practices in the Narok County

There has been a paradigm shift where governments and other independent policy/law makers have realized the importance of e-Government as a strong tool for responsive governance. This is a deviation from the traditional use of paper-and-file approaches in managing their businesses and this has proved disadvantageous in as far as accountability is concerned. The adoption of the e-Government however will depend on the capacity of the institutions concerned to implement effectively the e-Government system. In this regard, this section of the interview guide sort to find out what the county's e-Government practices were and looked to answers question regarding to information

gathering process, citizens contact point, role of human intervention in the service delivery process and level of system automation and accountability.

The information gathering process in a firm is an important step in the automation of the service delivery process in the organization. The way in which data is gathered will influence the extent to which the same data is going to be inputted and also the type of service delivery that can electronically be implemented. In this context, the researcher sought to determine the process of information gathering. The majority of the findings were that information gathering process in the county was low and therefore not able to discover the gaps and user requirement in the county such that it will be able to prioritize the implementation of the requirements and therefore utilize effectively the limited resource available. In addition, the slow process of information gathering has contributed to the slow adoption of e-Government in the county.

The adoption of the e-Government in an organization depends on the first contact point between it and the citizens. On the ways in which the Narok county populace uses to seek services such as request for licenses, permits and bids, the researcher found that the process is majorly done manually whereby the citizens and business people have to physically interact with the county staff to transact on the services. The other form of contact, though constituting a lower percentage is the use of available payment system such as banking system available. However, the use of the popular system is through the citizen visiting the licensing department where they make their applications and after payment the licenses and permits are issued to the client. In addition, the citizens visit

revenue offices for inquiries for licenses, permits and some get the information via the websites

Revenue collection in the county is one of the important activities that contribute to the realization of the organizations objective by raising the finances to implement the strategies developed. As a result, there is need for an organization to adopt an effective and efficient system for collecting the revenue and the existence of such a system will increase revenue collection rate and increase the capacity of the county to implement its projects. On the question of whether the Narok County involve human intervention in the revenue collection process, the interviewees pointed out that, that at present, the popular process is a manual process and there is little automation of the process. However, the game reserve revenue collection is through the automated system used by the KAPS. Indeed it was noted that with the sub-contracting of the revenue collection process in the gate collection, the revenue collection level had increased by 25 – 30% from the previous level. Therefore, with the exception of the Maasai Mara game collection, majority of the other revenue collection activities is still manually undertaken and this will probably lead to non-realization of the set revenue targets.

The findings from the research were that at present, Narok County has separate stand-alone systems that serves different needs of different departments. Some of the systems that are currently operational include the integrated financial management information system (IFMIS) for financial operations, with its servers at the national treasury, and the integrated personnel and pension Database (IPPD) that serves the human resource

departments. In addition, GPay system is used as a payment system that links transactions done by IFMIS to CBK for payments. It issues payment instructions to CBK. A hospital management system is in place to manage patients records and finances collected. This implies that the county has multiple systems that serve different function and there might be a need for integration to reduce the operational cost and improves management. As a way to improve the functioning of the county, the interviewees were asked on what system they would recommend to be adopted to shore up the performance of the county, they suggested that the county will need to consider implementing fully the e-procurement and e-payment system that is catered for in the IFMIS system that is currently being rolled out. Further, they suggested the county automate fully its revenue collection and monitoring system process. Since the county has a vast land mass, it was also suggested that the county implements a land record information management system (LRIMS) to effectively keep land transaction records.

On the need of the county implementing the e-Government, the interviewees noted that with the adoption of the system, it is expected that e-Government will increase the present level of efficiency and effectiveness though, the county is reluctant to fully embrace the ICT for fear of close supervision and monitoring from the National government. The management feels the county is an autonomous government that should not report to the national government. Thus, the county views e-Government adoption as a way of close monitoring from the National Government and yet counties want to be autonomous and independent and this explains resistance to fully adopt the e-Government system e.g. e- procurement where recently costs of basic items were exposed

to be sky rocketed. The County government performance was found not to be meeting the expectation of the citizens and though the adoption of such e-Government system as IFMIS will enhance the performance level, it is being viewed at the county level as a micro-management tool by the National government and yet the two levels of government are seen as independent. However, they were in agreement that when the systems are well put in place service delivery and access to information will be fast and cost effective.

4.4 Factors affecting E-Government adoption

This section presents the results and analysis of interviews conducted in this study. These may provide solutions to some of the challenges and obstacles that may face the successful implementation of e-Government service in Narok County. National and Local governments are motivated in promoting interaction with citizens, because of the affordability and accessibility of ICT. E-Government offers citizens certain advantages, such as transparency in the process of governance; cost and time savings through efficient services; simplification of procedures; improved office management; and friendly attitudes of personnel. However, challenges abound in the deployment and adoption of the e-Government in the counties and therefore knowledge and understanding of the factors affecting service adoption from the providers' point of view is a vital question for the county governments. In this regard, the researcher sought to find out the factors that influence the level of adoption of the e-Government in the Narok County. These factors included the lack of technical infrastructure, level of computer literacy among the users, top management support, financial constraints and external pressures.

4.4.1 Lack of Technical/ICT Infrastructure

The availability of the ICT infrastructure to operate the system is considered a factor that will inhibit the adoption of e-Government by the Narok County. On the question of whether the Narok County has adequate IT infrastructure, the interviewees were in agreement that indeed the county lacks adequate office space that and this poses challenges in LAN/WAN plans and this has posed a challenge in that, at present only three departments out of the eleven that are currently functional are networked. The county was also found not to have adequate IT fibers optic and the network that covers the whole county. This limits the how the county interconnects to other departments/sub-county remote offices as well as the national government.

“There poor infrastructure to support E- govt implementation i.e. limited office space hence poses challenges in LAN plans, most of the department are able also dispute across the county HQ” (Respondent 1)

For an effective adoption of e-Government system in the county, the researcher sought to find out what infrastructure is required to be put in place by the county. On this question, the interviewees pointed out that there is need of an Integrated and centralized county headquarters offices, approved ICT policy for the county and also create a government cloud. In addition, there is need for installation of the LANs, WANs, data centers etc. backbones infrastructure to the fiber and only access layer to have cat6A or better media. In addition, there is need for the county to establish an efficient fiber optic and other system to boost and improve network communication in the county. A lack of adequate IT infrastructure affects the data transformation and storages because it ensures security, business continuity in cases of failures. It will also enable data sharing and increase

application Re-use. Further, inadequate infrastructure such as a data centre makes it difficult for data transformation and retrieval since the availability of such data centers enables large amount of information to be stored in secure environment that prevents accessibility to unauthorized persons.

“Integrated and centralized county headquarters offices, approved ICT policy for the county, the government cloud, desktop services i.e. document” (Respodent 2)

The capacity of the County government to establish ICT adequate infrastructure is dependent upon the national government to plays its rightful role. It is on this basis that the interviewees’ were asked to explain what role does the national government in providing adequate infrastructure. On this, it was found that both National and county government play a key role in building the infrastructure and can use their abilities to take advantages of the ICTs as a facility to enhance and improve their administration. This is realized if the national governmental lays the National IT backbone across all the counties while the county government facilitates the realization of the last mile connectivity.

“The national governmental lays the National Backborn and county Government dues to the last mile” (Respondent 2)

In addition, for efficient role out of the ICT infrastructure, it was pointed that the National and county government need to provide adequate budgetary allocation for the installation of ICT infrastructures (financial support).

4.4.2 Computer and information literacy Among the Management and Users

The ability to use information or having possession of knowledge of information will influence the capacity of an individual to embrace information technology. If the citizens of a county are computer literate, then chances are high that they will be able to demand more accountability which will be realized through the use of ICT. The same applies to the management because it is expected that a management team that is computer literate will be more than willing to demand better use of the ICT capability than one which is lesser computer literate. On the question of whether the level of literacy among the senior management in the county affect their level of adoption of the e-Government, all the interviewees answered in the affirmative. It was found that the management is apprehensive about the benefit of ICT because they have not experienced the benefits of the ICT usage operations and some have unfounded fears that they might lose their jobs if all the functions that are currently being performed manually were to be automated. Further, the level of education among the management team and the elected leaders was also found to determine the rate of adopting the e-Government in the county.

“Management should understand the benefit of e-Government for them to adopt”
(Respondent 5)

The managers in the county was found to have been given inadequate resources though in terms of capacity, they do have necessary ICT detailed knowledge and what is lacking is adequate support and co-ordination from the top elected leaders in the county. However, despite the executive arm of the county not having allocated adequate resources for the

ICT infrastructure, there is need for the department to develop an elaborate ICT strategy and policy. It was found that the ICT department in the Narok County has not developed a full ICT implementation policy paper but instead has a draft policy document that is yet to be adopted as the necessary blueprint to guide the county in its ICT roll out. As a result, there has not been a systematic implementation of the ICT policy in the county.

“Yes top management, if they understand and appreciate implementation and adoption will be easy” (Respondent 4)

“Policy and strategy give direction of what, the county want to accomplish will ascertain time line, specific targets are important for the plan to succeed” (Respondent 2)

4.4.3 Top Management Support

For effective implementation of the e-Government, there is need for a widespread organizational support and acceptance from the top management of new ways of doing business or of a new technology. There is need therefore for the leadership of the county to embrace the adoption of the e-Government and with such a gesture, the rest of the county staff will work towards the realization of the said objective that is supported by the political leadership. On the question of whether the county management exhibit positive commitment, enthusiasm and support to the e-Government project, the interviewees pointed out that the Narok County government supports the support the ICT initiatives but because of the limited resources allocate to the program, there has been little success in the implementation of the e-Government system. On the other hand, it was however noted that in some instances the top management of the county have shown a lack of understanding of the benefits of ICT to the county. As a result, it was found that they tend to give preferences to projects that have direct influences to the public life and

is visible. They tend to view ICT as a support function to maintain the systems in place and machinery rather than a strategic department.

“Management views ICT as a support department rather than a department that can originate new ideas” (Respondent 4)

“Top management seems not to understand the benefits of ICT to the county .mostly they concentrate on projects that have direct influences to the public” (Respondent 1)

The top management team of the county need to come out openly to support the process of automating its processes through the adoption of the e-Government system. Their support is one of the important and critical success factors for e-Government adoption. Top management needs to publicly and explicitly identify the project proposed as a top priority and must be committed with its own involvement and willingness to allocate valuable resources to the implementation effort. On the question of whether this has been happening in the Narok County, the interviewees answered in the affirmative. They observed that in the present year budget (2015/2016), the automation of the revenue stream has been identified as the top management priority especially in tourism sector, which has being the highest revenue earner for the county and therefore aimed to improve the level of efficiency in the sector. They however acknowledged the need to roll out the automation process to the other sectors in the county.

“The county management fully supports the implementation of e-government. The only hindrance is the budgetary constraints for implementation” (Respondent 3)

Some of the interviewees pointed out that some of the county leadership considers the ICT function as expensive and will take a large portion of the county budget and there is need regulate its absorption.

4.4.4 Financial Constraints

The funding of the ICT transformation is the factor which promotes the success of e-Government. Lack of funding in a project is certainly a disincentive, especially when adopting an innovation means that individuals must go through a learning curve and take on new responsibilities as a result of developing expertise. In the case of the Narok county for example, it was found that in the current financial year, the ICT development budget is Ksh 33M which is insignificant compared to example roads which had a budget of 1.2Billion. This is against the backdrop of a request from the department of Ksh 230M that will be necessary for it to roll over basic infrastructure that will facilitate an ICT take-off in the county.

“the resources are hardly adequate ,there are many competing priorities. ICT has not been given priority for funds. The current development budget for ICT for the FY 2015-2016 is 33 Million shillings which is only 0.138% of the total budget estimates”
(Respondent 2)

There is need therefore for additional funding to be availed by the county leadership to enable the ICT department roll over its programmes.

4.4.5 External Factors

The National government has also an important role to play in the adoption of the e-Government system in the counties. The interviewees observed that such systems as IFMIS are the brain child of the National government and apart from the limited bottlenecks experienced, the system has been relatively successful. This shows that the government policies on ICT have positive effects on the e-Government because it makes its adoption mandatory.

“National government create a favorable environment for ICT and prosper including providing the necessary backbone infrastructure” (Respondent 5)

The other factor that affects the level of adoption of the e-Government system in the county was found to be the local community interest and participation of the e-Government process in the county. The local politics has kept most locals away from the county. The need for the community to hasten the process of seeking services in the county offices will forced the county government to adopt the system. This same pressure has been experienced from the social media where the county citizens will vent their frustrations with the level of service quality in the county offices and this influences the rate of e-Government adoption by the county officers.

In addition, the NGOs were found to play an important role in financing, training for purposes of capacity development of county staff. Recently, World Bank has been financing ICT proposals from the Counties and entering into long term partnerships with them. Example of projects they have been keen to finance are last mile connectivity, revenue management systems, hospital systems, ICT resource/training centers.

“The NGO’s can influence by being proactive for the community demanding better services It influences through sponsorship and communicating by way of electronics are making the system be adopted” (Respondent 2)

On the suggestions and recommendations that the interviewees were to make to the researcher, several of these were made. This includes the need for county to come up with ICT policy and strategy that will guide investment and reduce redundancy in adoption of ICT systems. In addition, there is need to develop ICT curricula that aligns

skill with industry demands and global standards. The interviewees also noted that there is need for the county to develop connectivity infrastructure, data Centre and various information systems to carry out various processes, build human capacity in ICT to be able to support the infrastructure. Further, it was suggested that both the national and the county government need to increase financial support for ICT innovation and projects and to institute a better financial planning to ensure the little resources available are well prudently, empower departments to become fully dependent and control their budgets.

4.5 Discussion of the Findings

In this study, qualitative research was employed through semi-structured interviews with the ICT officials from the County. Interviewees stressed the significance roles of the National and County government, local community, Non-governmental organizations and the availing of adequate resources to facilitate the rolling over of the e-Government initiative. However, although most of the interviewees agreed on the potential benefits of this channel, they pointed out that the number of e-Government services in the Narok County is very limited and the utilization level of these services is very low. Various authorities (Eggers 2004; Accenture, 2009) have all reinforced the importance of e-Government system and the resultant cost savings to governments and citizens alike. However, Eggers (2012) point that the potential huge savings are dependent on how quickly adoption rates increase.

On the capacity of the Narok County to absorb the technology diffusion, the study found that unlike the National government, the county has been slow in embracing technology based transactions and only one function related to the gate collection from the Maasai Mara National park had been fully automated. This finding is consistent to that of Musso (2007) who found that technology diffusion and adoption in larger organizations tend to be adopted more frequently than their smaller counterparts. Similarly, studying the diffusion of municipal Web pages in California, Weare and his colleagues (1999) and Musso and her colleagues (2000) find that adopters are more likely to have larger, more affluent, and more politically active population than non-adopters. Moon and deLeon (2001) also point out that larger municipal governments may have more stakeholders and be more sensitive than smaller municipal governments to the external pressures.

According to interviewees, the lack of advanced and secure technical infrastructure remains one of the main reasons why the staffs and top management of the county are hesitant to fully adopt e-Government. Issues such as systems integration, inadequacy of bandwidth, mobile device capabilities were found to be major factors affecting the offering e-Government services. At the same time, there is fear among the staff in the county due to their technological challenges, one being computer security. Indeed as AlAwadhi and Morris (2011), noted for e-Government activities, service continuity is critical not only for the availability and delivery of services, but also to build citizen confidence and trust. Therefore, the risks of fraud and misuse of sensitive data, sharing information between agencies, and the disclosure or mishandling of private information are genuine concern among the users.

The study found that for effective implementation of the e-Government strategy there is need for them to restructure existing organizational models, roles, responsibilities, training, and employees' needs. Training of employees' leads to successful implementation of e-Government and a lack of adequate training as was found resulted in a significant challenge in the adoption of e-Government. ICT is a very dynamic field that changes frequently. There is need thus to continuously train the staff in order to keep up with adapting effective and efficient technologies. In addition, the results of the interviews reveal that the following are other factors influencing e-Government adoption in the Narok County; leadership, funding and coordination; accessibility, availability and usability; security and privacy; training users; trust and privacy issues; access and IT skills. In addition, a lack of awareness, perceived usefulness and complexity of the systems; resistance to change and organizational issues were found to affect the level of e-Government adoption in the county. MengSeng (2011) in the same note that that even in the developed countries, the issue of trust and resistance to change are concerns that affect full adoption of e-Government in developed countries such as Japan.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the key findings of the study as well as the conclusions, limitations of the study, and recommendations for further research.

5.2 Summary of the Findings

The research objective was to establish factors affecting the adoption of e-Government in county governments of Narok County. In summary, the data collected on this study points to the fact that e-Government services have the potential of transforming traditional mode of governance at both the National and County government. The findings from this research can confirm that adoption of e-Government services in an organization can lead to cost effectiveness, transparency, and efficiency in the operations of a firm. It can further be stated that adoption of e-Government services have the potential of contributing favorably to the growth and development of the county. The information gathering process in the county was found to still depend on the citizens' visit to the premises of the county and due to the slow pace of gathering the information, or a times the county staff going out to meet citizens and thus the county was not able to discover the gaps and user requirement in the county such that it was unable to prioritize projects based on the feedbacks from its citizens.

Notwithstanding, the findings also revealed that Counties, just like most of the developing countries, face potential challenges and obstacles in their pursuit of e-

Government services. Clearly, the implementation and adoption of e-Government program in the Narok County is at its formative stages. A number of factors have been identified to affect the adoption of e-Government in the county and were collected from different publications and validated throughout the studied cases. These factors are a lack of technical and ICT infrastructure, level of computer and information literacy among the users and management, top management support, financial constraints and external pressures. In mitigating the challenges, the study has offered the following insights that could help mitigate the potential challenges. This implies that there is a need for the county government to put more effort into providing better e-services, and in bridging the digital divide, both technologically and financially. The county government should also try and ensure that the e-Government system is user friendlier, so that future citizens' expectations are met. Further, cooperation between various government agencies, the private and the public sectors are very essential for the government to successfully implement the e-Government program.

5.3 Conclusion

This study examined an emerging issue of e-Government in county governments in Kenya. Based on the research findings and theoretical discovery of other researchers, it can be concluded that county governments should strive to adopt fully the e-Government system because of its associated benefits to the institution and the users. The study findings suggest that the county government has not been proactive in the investment of the e-Government infrastructure. This is despite the fact that adoption of the system has been associated with increased speed of service delivery, reduction in cost, increased

transparency and accountability. Further, the study established that with implementation of the system, the level of revenue collection is expected to increase. The county governments should exploit the potential benefits of e-Government services to transform the way they govern and facilitate the development of their economies. It can also be said that e-Government services design and implementation have its obstacles and challenges.

In addition, the study found out that the factors that influence the effective adoption of e-Government in the county is determined by several factors; both internal and external. Consequently, it is imperative that the county governments develop appropriate strategies that will increase its revenue stream and this will lead to recruitment of more skilled manpower as well as increased investment in the IT assets. However, it is evident that the success of e-Government efforts depends, to a great extent; on how well the counties are ready to make use of the system. The issue of e-Government adoption, therefore, warrants a significant research. The two models and various frameworks proposed in the literature that address e-Government adoption primarily relate adoption to innovation and behavioral aspects. There is need for the county governments to invest adequate resources for innovation purposes and also in change management process of its staff and the populace of the county. In addition, different counties may have their own peculiar and unique challenges and it is important for policy makers to refrain from assuming that there are generic e-Government challenges for all regions such that a common model of developing and implementing the e-Government structure can be adopted.

5.4 Recommendation of the Study

The study shows that UTAUT model variables are used to check the adoption of electronic government services in Narok County. Theoretically, the research shows that majority of the users in Narok County are less frequent Internet users and this implies that the leadership at the county should endeavor to train this group of users and come up with simplified system that will not be a challenge to them. Example mobile technology has introduced simple means for users to access online services easily through SMS and dynamics websites. In addition, the transformation to e-Government services should be treated as a reform and restructuring process, and not merely the computerization/ automation of government operations. For efficient rolling over of the system, the county should borrow ideas from other regions, countries or counties that have successfully implemented similar e-Government projects, as it's said "do not reinvent the wheel". Further, it is suggested that the county leadership should partner with the private sector to consider the possibility of the private sector cost-sharing with the county the implementation of e-Government as well as transferring the technology and project management expertise. This form of partnership is expected to assist the county in reducing the cost of adopting the system.

5.5 Limitations of the Study

The major weakness in this study is that it was limited in scope. This means that the findings cannot be over generalized. This study was conducted with a strong presence of employees working at Narok County. It is possible that this exposure and working environment contributed significantly to their perceptions of the factors influencing

adoption of e-Government in the county. There is need therefore to also get the views of populace in the county. Further, the study used a descriptive research design and there is need to employ various inferential techniques to validate further the results. This study was also limited by other factors in that some respondents may have been biased or dishonest in their answers considering that they were all commenting on their employer. More respondents would have been essential to increase the representation of respondents in this study and allowed for better check of consistency of the information given. However, despite the above limitations, the findings presented in this paper have important policy implications.

5.6 Suggestion for Further Study

As county governments in Kenya continue their e-Government process, future studies need to examine the progress and effectiveness of county governments in delivering Web based public services and facilitating citizens' Web-based political participation. Comprehensive assessment of county e-Government, along with national e-Government, should be followed in the future to address vertical/ horizontal integration, public participation as well as other emerging regulatory and legal issues regarding e-Government.

Future studies may be performed to determine perceptions of illiterate populations and some research may be performed while considering factors like trust, security and education which may affect the user acceptance levels towards technology adoption in Kenya.

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APPENDIX I: INTERVIEW GUIDE

The interview guide will seek to establish:

- iv) To establish e-Government practices employed by Narok County.
- v) To establish the factors influencing the adoption of e-Government by Narok County

PART A: Background Information on the interviewees

- What current position in the County do you hold?
- For how long have you been holding the current position?
- Your highest level of education and professional qualification?
- list the systems adopted and those not adopted
- add benefits of e-Government should be shown in the questionnaire

PART B: E-Government practices in the Narok County

- 1) How would you rate the organizations information gathering process and how it influences the e-Government adoption at the Narok County? What form does your market analysis take?
- 2) How do the organizations citizens contact process, e.g, requests for licenses, permits, and bids take place?
- 3) In the licensing phase, does Narok County process involve human intervention or it is only the system that does all the transaction? How is the present system performance?
- 4) Is the present system of interaction between the government and citizens more open, accountable, inclusive and improves the governments' service delivery?
- 5). How is the performance expectancy of the e-Government system influencing the its adoption in the county?

- 6). Has the performance of the e-Government system been an hindrance to its adoption by the users? Please expound.
- 7). What is the role of the social influence on the adoption of the e-Government system by the citizens in the county?

PART C: Factors affecting E-Government adoption

1) Lack of Technical/ICT Infrastructure

- Does the county government have in place adequate IT infrastructure to support e-Government implementation?
- How does utilization of technology save time and effort through collaborating, cooperating and contributing in the adoption of the e-Government in the county?
- How does the infrastructure hold up the performance, data transformation, and storage process that are necessary in the e-Government services?
- How can the lack of ICT infrastructure affect government sectors in improving productivity and performance, policy-making, and provide better public services to the citizens
- Do you consider a lack of universal standards and unsuitable product types at Narok County a limiting factor as far as the implementation of the system is concerned? Please expound
- Does existence of standards that must be adhered to when it comes to website development and other ICT projects affect the adoption of e-Government at the Narok County?

2) Computer and information literacy of management and users

- Does the level of computer and information literacy among the senior management in the county affect their level of adopting the e-Government in the county?
- Does the level of education in the county senior managers affect the rate of adoption of the e-Government?

- Has the management been given adequate resources and knowledge to implement necessary ICT technologies in the county? How is the current position impacting the adoption of e-Government in the county?

3) Top management Support

- Does the Narok County management exhibit positive commitment, enthusiasm and support the e-Government project? How does the current state impact the adoption of e-Government at the county
- In the implementation of the present form of e-Government, has the top management support been exhibited?
- Have the top management come out publicly and explicitly to identify with the project as a top priority
- How does top management view ICT?

4) Financial Constraints

- Has the county earmarked adequate financial resources to the e-Government program? What suggestions on the funding aspect will you make?
- Does the county provide enough resources to the innovation process in the e-Government? What further suggestions can be made?
- How do you rate the ICT budget?

5. External Pressures

- How do the government policies on the ICT affect e-Government implementation in Narok County? Please expound
- Do the existing trade agreements in the county affect the level of e-Government adoption? Please expound
- Has the local community and media affected the rate of e-Government adoption?
- How does the national government as well as the non-governmental organizations influence e-Government adoption?

6) Is there any other factor that influences the adoption of e-Government in the county?
What other comment or suggestion would you make

THANK YOU