FACTORS INFLUENCING THE IMPLEMENTATION OF E-GOVERNMENT PROJECTS: A CASE OF DIGITAL VILLAGES IN DAGORETI SOUTH SUB-COUNTY, KENYA

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DECLARATION

This research project proposal is my original work and has not been presented in any other University.

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DEDICATION

This research project report is dedicated to my family, The Omwengas' and friends for their insurmountable love, encouragement and unwavering support all through the duration of my studies.

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ABBREVIATIONS AND ACRONYMS

ANT	Actor-Network Theory
DOI	Diffusion of Innovation Theory
e-ProMIS	Electronic Project Monitoring Information System
NPR	National Performance Review
ICT	Information Communications Technology
IFMIS	Integrated Financial Management Information System
IS	Information System
IT	Information Technology
NHIF	National Health and Insurance
OECD	Organization of Economic Co-operation and Development
TAM	Technology Acceptance Model
TRA	Theory of the Reasoned Action
UK	United Kingdom
USA	United States of America
UN	United Nations
ZHMIS	Zambia Health Management Information System
ZIMS	Zambia Immigration Management System

ABSTRACT

In the 21st century, most organizations including governments have come to appreciate the significance of embracing ICT in all operations. This technology advancement has encouraged governmental organizations and affiliations to reconsider the running of their processes and operations. In order to be successful and come up with systems that are future oriented, the managerial process of most governments are currently being done via electronic platforms. Therefore, globally governments are adopting electronic ways in service delivery in order to promote the provision of services to citizens regardless of where they reside and time that they want to access such services. The purpose of this research was to determine factors influencing the implementation of e-government projects in Digital Villages (Pasha Centres) in Dagoreti South Sub-County, Kenya. In this study, both empirical and theoretical literature review was done whereby different studies and three theories that relate to the implementation of e-government projects were reviewed. In this study, a descriptive research design was used and the target population consisted of 90 respondents from departments represented in the selected Pasha Centres in Dagoreti South Sub-County. From this population, a sample of 48 respondents was picked using stratified sampling technique. Questionnaires were used to collect facts after they were reviewed by experts to ensure validity. A pilot study was conducted three weeks before the actual research and reliability was tested using the test-retest method. After the actual research study, the collected data was analysed using the arithmetic mean as a measure of mean and the standard deviation as a measure of deviation. The statistical package SPSS was used to do data analysis and the results were tabulated in tables. Study findings showed that technological factors had the most significant influence on the implementation of e-government projects (mean of 4.33) followed by political factors (mean of 3.89), organizational factors (mean of 3.79) and finally social factors (mean of 3.42). Political factors like funding influence the quality, budget and schedule of projects. The study findings also revealed that technological factor such as e-government portal and access and system integration had an influence on e-government projects' schedule, budget and the level of satisfaction. Further, the results showed organisational factors such as training had the most significant influence on stakeholders' level of satisfaction and projects' schedule. From the research findings, it was recommended that adequate and relevant project management training needs to be offered to project managers and any other individuals that are involved in the implementation process. Additionally, all training needs should be identified immediately after the initiation phase of project and offered appropriately. Additionally, it was recommended that project managers and all the involved stakeholders should do realistic planning and allocation of finances to projects in order to limit the probability of projects stalling or going beyond the set timeline.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In the 21st century, there has been a change from the use of traditional forms of running organizations and offering services to the use of ICT in operations. This is the scenario because the use of information communication technologies and the World Wide Web has encouraged the adoption of electronic governance. Globally, up to the 1990s, USA's Federal government used information technology to automate most of its process without putting a lot of emphasis on automating most of the governmental functions (Wyld, 2010). This changed in the 1990s when there was a shift from backroom operations to emphasis on the use of e-platforms to offer services. During this time, in some nations for instance the USA, the federal government was in the process of reengineering its service delivery systems with the adoption e-platforms. In 1997, the first e-government strategy was adopted and in September 2000, the first e-government website was launched (Chung & Seifert, 2009). By 2008, there were 1537 operational websites whereby 89% of the government websites had full executable functions.

Qatar adopted its first e-government systems in the year 2000 (Al-Shafi & Weerakkody, 2009). The primary goal of this initiative was to promote efficiency in offering of the required governmental services and setting the pace for the complete overhaul of traditional methods of service delivery (IT). This adoption was followed by the establishment of the ictQatar in 2004 whose primary role was to oversee the development of the government's ICT plan that was directly connected to enhancing service delivery. Since the adoption of this, the Qatar government has been able to develop and implement a number of e-government projects including e-Health and e-Education (Al-Shafi & Weerakkody, 2010).

By 2010, e-government was still a new concept in Zambia due to lack of a proper e-government plan (Bwalya & Heally, 2010). As of 2009, Zambia had the least advancement in terms of developing e-government systems. This made it to lag behind numerous African nations such as Zimbabwe, Congo and South Africa. Some of the factors that had made Zambia to lag this behind included lack of good will from employees where such systems were being launched, poor infrastructural development, and lack of expertise on e-platforms development, running and management. Additionally, the government lacked enough funds to support this initiative; hence, its overreliance on donor support (Bwalya, 2009). In Sub-Saharan Africa, some of the countries that are leading in terms of development and use of e-platforms include Tanzania, South-Africa and Botswana. It is

worth noting that although Botswana has achieved great milestones in adoption of e-platforms, it has faced numerous challenges over time which include limited education of its citizens as concerns the benefits of e-platforms and lack of awareness (Bwalya, 2009).

Nationally, Kenya's first e-government policy and strategy was first approved in the year 2004. Since its inception, the government has been in the frontline in promoting the use of the e-government system as evidenced by a number of its projects. Some of these projects include Integrated Financial Management Information System (IFMIS), iTax, e-Procument, Pasha Centres and the common Huduma Centres (Remenyi, 2006). Currently, the government has implemented some of these initiatives such the e-ProMIS in all its ministries. The main aim of such implementation is to encourage transparency and accountability through monitoring and evaluating government and donor funded development programs and projects (International Monetary Fund, 2014). Another common e-government project that is widely used in Kenya are the Huduma Centres. Through it many Kenyans are presently able to renew their licences and permits easily and receive other governmental services (Ng'aru & Wafula, 2015).

1.2 Statement of the Problem

As Ndou (2004) argues, although e-government is a concept that has been widely accepted in the world, most e-government related projects face many implementation challenges. That is, although the benefits of an e-system in government cannot be disputed, there are several concerns about the rate at which most of this initiatives are failing. Due to this, most governments and societies are yet to reap the full benefits of e-systems. For instance, in Kenya since the inception of Pasha Centres project in 2011, more than 20% of the projects are not functional whereas a good number of the remaining are not fully functional as most of them only run with minimum requirements.

As research studies by the ICT authority show, more than 93% of the existing Pasha Centres operate with only some aspects of the minimum requirements of a Digital Village, while the remaining are yet to have the minimum requirements more than 10 years since they were established (ICT Authority Kenya, 2015). Although most records of the existing Pasha Centres are very simple hence offer very few insights on the factors that have influenced the implementation of the projects over time, most blame the failure on the lack of proper governmental support and adequate funds (Atieno & Moturi, 2014).

In addition to lack of funds, lack of the required licence fees charged by the government has also greatly hindered the realization of the projects, as most implementers term the exorbitant licence fees charged by the government as unmanageable. Moreover, some implementers of Pasha Centres have

cited lack of adequate training to be another primary cause of the lower success rate of the Pasha Centres (Hallberg et. al 2011; ICT Authority Kenya, 2015). Further, most of the entrepreneurs who won bids for establishing these centres were not IT empowered hence, even managing the centres is a challenge to them. Another issue that has promoted the failure of most e-government projects is lack of appropriate legal framework. Although the government established a legal framework under which these centres were to operate, for example being centres of digital literacy, most face closure threat from the ministry of education due to the fact that they are not accredited training centres (Atieno & Moturi, 2014).

Further , some research have cited lack of demand for some services that are offered by these centres as one of the primary challenges that have slowed down their overall development progress (Atieno & Moturi, 2014). In Dagoreti South Sub-County, up to date only two Digital Villages exist. Out of these, only one is fully operational with very few offered services as the second one is yet to be fully operational due to lack of enough governmental support in terms of funds and provision of infrastructure. As a result of this, this research study sough to examine various factors that influence the implementation of e-government projects in Kenya and offer recommendations on how to increase the number of successful e-government initiatives.

1.3 Purpose of the Study

The purpose of this research is to explore factors influencing the implementation of e-government projects while focussing on Digital Villages (Pasha Centres) in Dagoreti South Sub-County, Kenya

1.4 Objectives of the Study

The objectives of this research were:

i. To assess the influence of political factors on implementation of e-Government projects in Dagoreti South Sub-County
ii. To establish the influence of social factors on implementation of e-Government projects in Dagoreti South Sub-County
iii. To determine the influence of organizational factors on implementation of e-Government projects in Dagoreti South Sub-County
iv. To determine the influence of technological factors on implementation of e-Government projects in Dagoreti South Sub-County

1.5 Research Questions.

The following questions guided the study:

i. In what ways do political factors influence the implementation of e-government projects?
ii. How do social factors affect the implementation of e-government projects?
iii. In which way do organisational factors influence the implementation of e-government projects?
iv. What is the influence of technological factors influence the implementation of e-government projects?

1.6 Significance of the Study

This study may be of significance to government officers who are involved in the implementation of e-government initiatives or those who are currently involved in the same process. This is because it will provide vital strategic issues that must be taken into consideration as they implement these projects. In addition, policy makers may find this research study of significance, because through understanding the primary factors that affect implementation of projects, they will be able to formulate mitigating measures to ensure that projects succeed.

Additionally, this study may be helpful to donors on deciding the nature of e-government projects to fund and how such projects' progress can be assessed and failure factors mitigated. To scholars, this research may add insights into the existing knowledge of project planning and implementation of e-government projects.

1.7 Delimitations of the Study

The study was de-limited to factors that influence the implementation of e-government projects in Dagoreti South Sub-County, namely political, social, technological and organizational factors.

Although e-government projects have been implemented throughout the country, the scope of the study was delimited to Dagoreti South Sub-County.

1.8 Limitations of the Study

One limitation that was faced during research was unwillingness of respondents to provide full information for fear of being reprimanded by bosses. This was mitigated by creating a rapport with individual subjects when distributing the questionnaires which made most of them to return duly completed questionnaires

Another limitation that was experienced was the issue of confidentiality due to the tendency by most organizations to treat most information as classified and confidential; hence, most subjects were reluctant to volunteer useful information for fear of being unfairly judged. This was mitigated by assuring respondents that the study was purely academic and any adduced information will be kept confidential.

1.9 Basic Assumptions of the Study

The researcher assumed that all respondents were there to participate in the research. It was also assumed that the answers given by respondents were true and an accurate representation of the prevailing conditions. Further, it was assumed that participants gave sincere interest in participating in this research and did not have any other motives. To ensure this, respondents were assured of confidentiality and anonymity and nothing they say was to be used against them.

1.10 Operational Definition of Terms

Extent of digital divide - This is an economic and social disparity that exist between individuals, communities, societies, and even countries when it comes to accessing using or even how the societies are impacted by the use of Information Communication Technology.

E-government - This refers the application of or use of information communication technologies for an aim of enhancing and promoting the offering of public services in the most Efficient and fast way.

E-government Portal -This is a specially designed government website that acts as a central repository of governmental information depending on the intended purpose, or the nature of content. Different sections of the portal displays and provides different kinds of information.

Organizational Structure – Refers to the hierarchical organisation of lines of power. The structure defines employees' power, duties and responsibility.

Pasha Centre – Refers to a Digital Village project whose primary function is to offer services to the public through computers that are connected to a computer.

Power Distribution – Refers to how authority is distributed in an organization

Project Schedule - This is a tool that is used by organisations to determine and direct tasks that are supposed to be done, the organisational resources that will be used to complete such tasks and the timeframes within which such tasks should be completed.

Stakeholder - This is an individual, group or organization that may affect, or be directly affected, or perceive itself to be affected by a resolution, activity or the results of a project.

Systems Integration – This refers to the practice of bringing together independent computer systems that work separately and independently with a soul purpose of ensuring that they work as a single unit that is meant to offer service centrally. This can be inform of software or independently running informations systems.

1.11 Organization of the Study

The research report is structured in five chapters. The first chapter examines introductory information for this research study, including background of the study, statement of the problem, research objectives, research questions, significance of the study, delimitation of study, limitation of the study, basic assumptions of the study, organization of the study, and operational definition of terms.

Chapter two presents the empirical review, theoretical review and the conceptual framework. The third chapter examines the research methodology, which include the research design, target population, sampling technique, research instruments, data collection procedures, data analysis, and ethical considerations.

Chapter four presents the research data analysis, interpretation and discussions of the findings as per the research objectives, while Chapter Five presents the summary of the research findings, conclusions, recommendations, and suggestions for further research based on the findings.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the empirical and theoretical literature review relevant to the study of the factors influencing the implementation of e-government projects in Kenya. It will also discuss three theories and how significant they are this study. Empirical literature review is presented in the four factors of the study that include organizational, political, social and technological factors. Additionally, the chapter will present the conceptual framework, which will show the independent and dependent variable. The last section of this chapter will present the gaps arising from studies of previous studies.

2.2 Empirical Review

This section examines the empirical literature review on previous studies relating to the influence of the independent variables of this study (organisational, social, technological and political factors) on the dependent variable implementation of e-government projects in Kenya.

2.2.1 Political Factors and Implementation of e-government projects

In a research study that was carried by Abbasi (2005) on the Apex Programme and Project Level in India, Abassi found out that without adequate governmental support, a conducive political environment and a supporting legal system, the probability of an e-government venture succeeding is low. Abbasi further adds that leadership should involve individual who know and understand the significance of implementing an e-system both regionally and nationally. In most developed counties, the necessities driving the implementation of e-government projects vary depending on the needs of its people. For instance, as research studies show manpower costs and constraints are some of the factors that drive technology induction. As a result without proper financing, the probability of a project failing is very high. Although Abbasi critically analyses the primary political issues that influence the implementation of e-government projects, the study fails to connect them to how they influence leadership structures, which in turn determine the logistics of implementing most e-government projects.

In another study, Kim et Al., (2009) found out that the regulatory dimension and strong leadership are among the critical factors that affect the implementation of e-government projects. The nature of existing legal framework is influenced by politics and legislation. As a result if the existing political environment does not offer a conducive environment for thriving of such systems, then the success

of such initiatives will be in jeopardy. To implement an e-system, there should be access to the internet and establishing of digital centres that offer services via an e-platform. As a result, governments should always endeavour to come up with rules that will eliminate unnecessary legal barriers such as excessive taxation and exorbitant licence fees on entrepreneurs. Further, a proper regulatory framework can help to protect consumers more so in an environment where there is existence of the command and control economy. As a result, the streamlining of the existing rules is significant more so to e-government systems where speed, innovation and flexibility are primary determinants of the level of success of any e-government venture (Ashaye & Irani, 2013).

Another study that was carried by Ebrahim and Irani (2005) in the USA found that more than 57.1% of USA's municipality and county governments' e-government project faced implementation challenges due to lack of enough funding. Most of the e-government projects are sourced to private entities as most public sectors show resistance to the big financial investment that is required for initiation and implementation of an e-government. This is evident in most nations because during the initiation phases, the top leadership of most governments embrace the idea of implementing e-government systems due to availability of donor funds, but once the funds are cut or reduced by donors most of them lose interest as the available funds are less (Ashaye & Irani, 2013).

Further, another study by Bwalya (2009) on e-government projects in Zambia proved that without proper funding, there was a zero percent probability of any e-government project succeeding. The cost of offering e-services services is assumed to be very high as it involves the setting up of IT systems and making sure that such systems are operational. To achieve this in a governmental setting is hard since most governmental funding comes in cycles that are sometimes not sustainable. As a result the financial constraints that come with this venture, most e-government initiatives faces numerous financial constraints, which if not sorted can cause total failure of e-government projects. Therefore, strong governmental support, funding, and a proper legal and regulatory framework are some of the primary political issues that determine the success of an e-government project (Drew & Alshehri, 2010).

2.2.2 Social Factors and Implementation of e-government projects

Public organisations that have or are in the process of implementing e-systems have done this by overhauling their organizational structures by embracing new technological developments (Khanh, 2014). Teo et al., (2009) argues that regardless of the technical value of innovation, an organization may itself cope after a movement of other organisations to obtain status presenting social fitness in a social structure. In addition, according to Kim et al., (2009), organisations often take action as they

are expected to follow industry norms rather than economic considerations. The process of implementing an e-government system entails the coming up with easily accessible citizen-centric services. As a result, there is need for such a system to ascertain what people want; hence, implement systems that people appreciate (Misra, 2007). Misra further argues that one of the primary factors that differentiates an e-government system from traditional systems is its ability to offer what citizens want in a timely manner. This research used a descriptive research design to analyse e-government initiatives.

Additionally, for an e-government initiative to be termed as a success, its rate of adoption must be high because without people using such a system, then with time it may become obsolete. As a result, for its adoption and acceptability rate to be increased, implementers of such a system should endeavour to design an adoptable e-government system. In most developing nations, this is a challenge as most e-government systems are implemented without taking into consideration what the public and other individuals who are likely to be affected by the system want. This has led to a low adoption rate; hence, the low success rate of most e-government implementation initiatives (Boonstra, Yonazi, & Sol, 2010).

When implementing an e-government system it is necessary for those implementing the system to make sure that the people to be served by such a system are not only aware of the system, but also what it is supposed to do and how it functions. There is a direct connection between acceptance and embracing of a system and the level of awareness, because without awareness most people are likely to stay ignorant of an e-government system. Lack of awareness is another primary reason that hinders successful implementation of e-government systems in most nations as lack of awareness leads to low adoption rates; hence, with time any implemented systems become obsolete. It is worth noting that, the tremendous advance of e-government has led to a greater need for awareness creation both to people who are the recipients of e-government systems and in organizations as most people do not have the essential information about developments in the technology world (Papazafeiropoulou, Pouloudi & Doukidis, 2002).

In a study that was done by Al-Omari (2006) on e-government initiatives in the Jordanian government, it was found out that most citizens had limited awareness and knowledge on what an e-system was and how it was likely to help get the services they needed. In this research, a descriptive research design was used. In another study that was done by Bwalya (2009) to determine how government policies affect the implementation of e-government and how in turn government innovations affect public governance, it was found that Zambia's endeavour to implement e-

government platforms had failed due to lack of knowhow of its employees and poor attitudes towards such projects. In another study to ascertain the factors that reduce the rate at which people embrace e-government systems in the Hashemite Kingdom of Jordan, Alomari, Sandhu and Woods (2009) found out that lack of awareness and low internet knowledge were among the primary reasons why most implementation ventures had failed.

Further, although the ratio of citizens who are using e-government systems is increasing, digital divide is still among the primary factors that hinders the implementation of e-government projects. It is worth noting that as much most studies centre the question of the level of digital divide on how easily people can access e-government services, in reality it is more on how people are enlightened or informed about the existence and working of e-government systems. Most of the people that are able to access and use government websites are individuals who are well informed and mostly from specific region where the society has learnt to accept the significance of e-government systems in service delivery. Closely connected to education and knowhow is the level of competency and information literacy. When there is a great disparity in the level of competency and knowhow the implementation of an e-government project will be at jeopardy, as this means that little adoption will take place hence any e-government system will become unused leading to its failure (Carter & Bélanger, 2006).

As a result, there is need for e-government officials and implementers to have knowledge of disparity that exists and help to provide multi channels that will ensure that every individual is able to embrace and use technological advancements. By doing this more so to the marginalised groups such as the elderly will help to bridge the gap that exists. In a research study by Al-Shboul et al., (2014) on underlying issues that had impaired the use of e-government systems in the Jordanian government, it was revealed that the big disparity in knowledge amongst different groups was one of the primary factors that had made the adoption of e-government systems to stall. In this study, semi-structured interviews were used to collect data whereby 12 governmental agencies and 36 persons were interviewed.

2.2.3 Organizational Factors and Implementation of e-government projects

Organisational structure is seen as the way that organisations separate the responsibility relationship that holds a structure together and how to coordinate it. When it comes to an e-government setting, government agencies that are mandated with the role of offering this services are encouraged to ensure that the required changes in work processes are done in such a way that conflicts are minimized (Weerakkody & Dhillon, 2008; Doukidis, Pouloudi & Papazafeiropoulou 2002;

Abdelsalam, Reddick & Elkadi, 2013). Successful implementation of an e-government system may sometimes require an overhaul of an organization's structure. Such overhaul comes with changes in the organizational culture and power distribution, which require employees' acceptance (Elkadi, 2013).

To make sure that such changes are taken positively, a proper change management approach should be adopted as lack of these can result in a slow or dysfunctional change process more so when there is resistance from the employees or individual that are involved in the implementation process. As Saboohi & Sushil (2010) argue, poor acceptance rates of organizational changes that come with implementation of e-government systems is another key reason that can cause failure in performance of e-government projects. In another research study that was done in Saudi Arabia to reveal why the adoption rates of e-government systems was very low, Al-Shehry et al., (2006) found out that changes that come with reengineering of work process (change of organisational structure) can cause resistance to change. This occurs in most cases because civil servants feel that the new changes may make them to lose their jobs and power as installation of some systems may come with numerous organizational changes.

Closely related to the organizational structure is how power is distributed in an organization. Just like in any other organizational settings, in an e-government set up there must be a hierarchical definition of power in terms of command. As research studies show, in most scenarios implementation of an e-system can lead to transfer of some functions of an old systems to a new department; hence, necessitate changes in the status of some employees that are involved in the implementation process. Unless this like a change is taken positively, then any resulting revolt can be very detrimental to the implementation process. Research has attributed this to the fact that some employees may feel powerless, something that can lead to deliberate sabotage from some quarters of the organization (O'Donnell & Boyle, 2004).

Another research by Choudrie and Weerakkody (2005) in the United Kingdom proved that implementation of a new IS/IT environment to facilitate e-government always involves major organizational change and shift of power within the organization. As a result, this may make most users come up with ways of ensuring that the implementation of such a system is not a success as c old business models may be favouring their skill set. Those employees who feel that their power or control may go may go as far as frustrating the implementers or deliberately avoid using the set up systems in an endeavour to make sure they are obsolete (Doherty & King, 2005; OECD, 2005; Doherty & King, 2005)

In another study to investigate issues that relate to the transaction stage of an e-system, Irani et al., (2005) found out that the installation and application of such systems may be stalled by a number of organizational culture issues as such systems may cause a change in the way in which an organization operates. Any change in the organizational structure and power distribution is likely to automatically change an organization's culture. Such changes in culture if accepted by employees can increase the success rate of e-government project but if otherwise, then the likelihood of the implementation process becoming a success if zero. Further, the implementation of an e-system may come with some new challenges which require interdepartmental cooperation, trust and transfer of responsibilities; hence, the need for proper policies of managing this to be in place (Saboohi & Sushil, 2010).

For this to be success, the level of loyalty to an organisation and dedication to performance should be encouraged, because without this an organisation will be dysfunctional leading to failure of an e-government system. Therefore, governments are required to ensure that proper strategies and policies of dealing with this are in place even before initiation of the process. Moreover, it is important for implementers to always have in mind that the creation of a public culture is vastly different from the physical infrastructure. As a result, there need for them to anticipate and come up with measures of mitigating the negative effects that may come with change in the organizational culture. In this study, case studies were used (Nograšek, 2011).

Moreover, in an e-government setting, training has been termed as one of the major concerns that must be taken into consideration. This is because all the individuals who are involved in the implementation process must have the required skill set and be ready to accept any alterations in their work process that might come with the new systems. Additionally, as a result of the numerous developments in the ICT world, some previously acquired skills may not apply in the new systems environment; hence, without proper and relevant training on e-government processes any implementation process can be put in jeopardy (Doherty & King, 2005). Further, Weerakkody and Choudrie (2005) points out when employees lack the necessary training and skill set, then the entire implementation process may be at risk. Training is considered an important factor that is expected to influence the implementation process as training offers new learning opportunities and insights that are necessary in an e-government implementation process. Further, lack of a strategic training vision and comprehensive training plan on user and implementer orientation strategies sets room for failure, as new systems comes with lots of ideas to be learnt and adopted. As a result, if training resources are not sufficient, there will be a decrease of normal development procedures leading to an increasing risk of failure (Layne & Lee, 2001; Leitner & Kreuzeder, 2005).

2.2.4 Technological Factors and Implementation of e-government projects

When it comes to implementing e-government projects, a lot of gains can be got from a well-structured and organized IT infrastructure that is based on a universal computing standard. Furthermore, when installing new infrastructure, implementers must ensure that the existing systems are protected or even upgraded (Wanga et Al., 2004; Nysveen et Al., 2002; Al-Khouri, 2007). In an attempt to discover the main issues that influence the development of e-government projects in Vietnam, Khanh (2014) found out that unreliable IT infrastructure is one of the primary factors that had made Vietnam to achieve little in its e-government sector. In this research, Survey questionnaires were used whereby 450 public employees were interviewed.

In an IT world, there is need for a proper and reliable infrastructure as this is a critical determinant of e-government advancement. Although a good infrastructure creates an "enabling environment" for implementation of an e-government system, without proper IT standards to run and maintain such a system little that can be achieved. This is the case because an e-government systems requires proper data exchange procedures or protocols so that people's private information and government protected information is secure. The security requirements of a computer network should be met and proper integration of databases done using proper IT standards. It is worth noting that standards enhance the interoperability and enhance service delivery. However, for this to be possible the government should also put in place a mechanism of making sure that any adopted standards are adhered to. With this in place users of any e-government system are likely to have confidence in a system; hence, promote its implementation (Budhiraja, 2008).

In a research by Joia (2007) on sources of resistance to G2G endeavours in Brazil, it was discovered that although different organizations have different structures that work together, lack of proper IT standards had made the progress of e-government systems development to slow down due to poor interoperability of the systems. In the same study, it was revealed that if the existing hardware and software are incompatible, then the development and implementation process may fail as these systems are supposed to work as one for a common goal. To ensure that an implementation process succeeds, there is need to ensure that the required IT standards are in place (Al-Kaabi, 2010; Dijk, 2003; Teo et. al., 2009; Taylor, 2006). In this research study, case studies were used to establish the relationships of the study.

In another study in Bahrain, Al-Kaabi (2010) found out that without IT standards and proper system integration, everything in an e-government structure will be in disarray. From the research Al-Kaabi also proved that e-government systems must connect vertically and horizontally among all the

involved agencies and services offered as this is an integrated system. As a result there is need for proper infrastructure and standards to be in place in addition to making sure that governmental portals are accessible for implementation of e-systems to be a success.

Additionally, for an e-government system to execute all its expected functions properly, all IT systems should be integrated heterogeneously whereby back-end computer systems are brought together for construction of a functional system. This like a venture requires not only experts but also hardware and software that is sometimes very hard to obtain. Therefore, unless the government or donors chip in to facilitate this, most of the time execution of an e-government project may fail (Al-Kaabi, 2010). Integration of an e-government system requires the bringing together of various departmental functions or connecting of different departments in a way that data will flow between them easily and feedback offered when needed. Therefore, at all times proper integration should done as this will ensure a smooth flow in the executing of functions by a system, failure of which can reduce a system's operation (Lam, 2008).

Further, in an endeavour to understand how security issues affected the implementation of e-systems, Jamieson and Smith (2006) proved that security and privacy issues can greatly impair the implementation process. In most scenarios, security related concerns include computer privacy and protection of personal information. In an IT environment, there is need for continuous monitoring and revising of data protection laws in order to guarantee that people's information is protected (Wanga et al., 2004; Joia, 2007). Without this, then some people's personal information may leak and if this like a thing occurs, then the e-government system will have failed. To ensure this, the government must ensure that there are strict data privacy policies and a mechanism of ensuring that only the authorised persons can access such information (Acton et al., 2005; Liang et al., (2007).

In an e-government system, strengthening confidence in privacy measures by making sure that there is mutual transparency among the government and citizens is also a necessary for these projects' success. To ensure this, all security requirements should be determined, proper protocols and controls implemented and continuous monitoring and reviewing of these measures done from time to time in order to fix any gaps that may arise during use of e-government systems. Without this governments and implementers of e-government systems always find themselves threatened with cyberspace identity thefts and privacy violations. If this like scenarios arise then citizens always remain sceptical and mistrust services that are offered through an e-government platform, a factor that can greatly impair successful implementation and eventual growth or continued working of an e-government system (Palanisamy & Mukerji, 2012).

Another research by Moen et al., (2007) on most governments' websites revealed that most governments' e-government platforms are vulnerable to hacking and web-attacks. For instance, over 90% of European e-government platforms are vulnerable to cyber hacking and attacks; hence, raising numerous issues of data privacy and security. When such like these attacks occur the resulting effect is citizens staying away from such systems which eventually lead to them failing. Considering this, it is of significance for all governments to make sure that all private information is safe and protected. By doing this implementation of more e-government systems can be promoted (Palanisamy & Mukerji, 2012; Rao, 2016).

2.3 Theoretical Framework

This is a review of three theories and how relevant they are to this study which include Diffusion of Innovation Theory, Actor-Network Theory (ANT) and Technology Acceptance Model.

2.3.1 Diffusion of Innovation Theory

Innovation is a concept, way of doing things or an object that is assumed to be new by people. The Diffusion of Innovation Theory (DOI) was advanced by E.M Rogers in the year 1962. This theory was supposed to give insights on how a new concept or a new invention's use spreads in a certain community. According to the theory, from time to time as people needs change, they are likely to adopt a new idea, behaviour or products in order to suit the needs of that time. The key for adoption is that the involved parties should recognise that the innovation as unique and new (Everett, 2003).

In addition, according to the theory, embracing of an invention, conduct or creation never happen concurrently in a community, but instead it is progression where there is always those who adopt it fast while others take time or even never adopt the new innovation. As research studies show, there is a variation in characteristics between individuals who are always ready to adopt new ideas and those who are slow to do that. As a result, when adopting an innovation it is necessary for the implementers to understand the target population as this will help to ascertain factors that may encourage or deter the acceptance of innovations. As per the theory, there are five types of adopters namely: the innovators, the early adopters, the early majority, and late majority and the laggards. The first class that is made up of innovators is a group of people that are always ready to embrace an invention. Most of individuals in this group are risk takers and lovers of new ideas; hence, they do not need a lot of persuasion. The second class early adopters includes individuals that represent opinion leaders and love leadership roles. However, to ensure that they accept innovations, they should be equipped with information on this innovations (Seemann, 2003).

The early majority class includes individual who are rarely leaders and must be provided evidence of the working of an invention before they embrace it. Different from this class, the late majority is made up of people that rarely embrace a change unless they are shown the number of people that have accepted such a change or embraced an innovation. But with provision of the correct information, most people in this group are always ready to embrace innovation. The last group of laggards is rich with individuals who are mostly conservative and sceptical of change hence they need a lot of convincing, proof and even the use of some force for them to accept innovations (Seemann, 2003).

Although this theory presents a lot on the features of a new idea or development that could affect the adoption of such, people's way of thinking and the characteristics of adopters, as Sahin (2006) contends, the theory assumes that the benefits resulting from adoption spread widely and are uniform, which is not true. This is because in some instances gaps resulting from the inequalities may widen. Additionally, Shy (2001) adds that the theory fails to take into consideration the attributes of both the innovations and the organizations implementing then.

Further, Shy (2001) further disagrees with the static categories of adopters, because every individual can be an innovator as long as what they create is matched with the right organizations. As a result, the primary limitation of this theory is that it does not consider people or an entity's resources or social support and how this affects the adoption of new innovations. Another limitation of this theory is that it is biased to social systems that affect implementation and adoption of innovation and does take into consideration other factors; hence, in the context where people must take part in the implementation process such as implementation of e-government projects, this theory is not practical.

2.3.2 Technology Acceptance Model

The Technology Acceptance Model (TAM) was advanced by Davis in 1989. This was a revision of the model of the Theory of the Reasoned Action (TRA) that had been in existence. On the contrary to TRA, the proponents of this theory developed models of acceptance in the ICT context. The invention of this model was influenced by IBM Canada's need to understand to what extent new markets can accept its new products and discover what makes people to use computers (Davis, Bagozzi & Warshaw, 1989).

According to Venkatesh et al. (2003), TAM focusses on the reason why people will want to use or not want to use ICT in their daily operations. In addition, the theory sought to understand how it can enhance the adoption of ICT and how adoption can be promoted. From this study, Davis found that if

people thought of the new invention as a promoter of efficiency they are likely to embrace it even if it was hard to use. One advantage that comes with TAM is that its tenets are rooted on information technology and it has a strong abstract base apart from its broad empiric support. In addition, TAM was developed to provide a basis of understanding the casual relationship between external variations of consumers' recognition and the actual usage of the computer (Lee et al., (2003).

Most proponents of this theory agree that, societies are inclined to use or not use a specific technology with a primary goal of enhancing performance at work-perceived use. However, if an individual perceives a technology to be useful but very hard to use in a way that a lot is needed for its use, its use may be at jeopardy (Lee et al., 2003). As a result, Technology Acceptance Model is centred on two ideologies: the perceived utility and the perceived facility (Venkatesh et al., 2003). Further, as per this model, the use intention is the primary determinant of the nature of use that a system will be put into. This is mostly determined by people's outlook of the system in terms of the actual use and the advantages that come with it. The association between attitude and intended use is that human beings have a tendency of accepting or doing things they like. When it comes to the connection between the expected usefulness and what the system is likely to be used for in a society, most individuals develop intentions in relation to things they assume will help them to enhance overall work output (Galletta, Mccoy & King, 2007).

According to this model, in the tech world people are likely to develop positive intentions and attitude towards technology they perceive to be relatively easy and helpful (Lee et al., 2003). A number of inferences can be drawn from this theory as concerns the implementation of e-government projects. For instance, as the model suggests, because the perceived usefulness of a system determines the level of its acceptance by its recipients, e-government implementers must ensure that those who are likely to be affected by the system know and appreciate the significance of what is to be put in place before the entire development and implementation process starts. Although, this theory is practical in an e-government context, some scholars have widely criticised its practicality. For example, Chuttur (2009) criticizes its empirical value and its ability to offer proper predictions on acceptance of a system. Additionally, Benbasat and Barki (2007) also add that TAM leads to may confusions and "theoretical chaos" when one tries to modify it to fit the changing IT environments as it tends to ignore the social processes of IS development and implementation.

2.3.3 Actor-Network Theory (ANT)

This theory was advanced by Michel Callon, Bruno Latour and John Law in the 80's. It was advanced in recognition that actors construct networks that bring together technical and social

elements and the components of these networks. At the centre of this model are actors. These are the individuals who develop connections amongst themselves. The actors in this model may be non-human or human and these are people who determine the development of new ideas by analysing what people want and how such can be met with the available resources. Additionally, this group of individuals is mandated with the primary goal of marketing an innovation and ensuring that more people in the society accept the new developments (Aanestad et al., 2004).

In this theory, technology is a network with its elements namely the software, hardware, the designers and assemblers of all this. As a result, it won't be wrong for one to say that ANT is a theory of the social and all the components of a social system (Latour, 2005). Although this is the case, it is worth noting that this theory does not provide a clear model that can help one to understand the connection between the existing technology and how it affects individuals who use it. For instance, under ANT power is the influence of a collective voice on what some people do. The two main concepts of this theory are the actor or an actant (human part of the technology) and the actor-network. The actor-network is the set or a group of individuals, technology parts, societies, and tech entities that are connected by common interests (Ziemkendorf, 2008).

In addition to this, there is also enrolment and translation, which is the processing of developing a network of actors with common interests. Another concept of this theory is delegates; a set of individuals who are advocates of a specific need. The last concept is irreversibility, which means that once the delegates approve something, such approval is binding to all the involved parties (Stanforth, 2006). It is worth noting that, in this theory all historical occurrences are examined and lessons for the future established regardless of the time. In this historical examination ideologies and positions that were taken by all stakeholders and how the inventors tried to promote the new innovations is critically examined (Neyland, 2006).

Although this theory has also received some criticisms for example the theory being amoral, proponents of this theory counter that by arguing that amorality of Actor Network Theory is not a must. That is, although ethical and political positions are of significance, one should endeavour to give a description of the network before taking up such positions, because a network is made up of all those dimensions (Whittle & Spicer, 2008). In my view therefore, these three theories are pertinent to the implementation of e-government projects as they focus on innovations and technology acceptance. Nevertheless, for the purpose of this study, the Actor-Network Theory is more applicable as it as it brings together the social, technological and organisational factors in explaining the factors that influence the acceptance and adoption of innovations. Additionally, it

offers a proper way of explaining how technology and social networks influence the implementation of ICT (e-government) projects as the success of the implementation process is determined by people accepting its usability.

2.4 Conceptual Framework

The Conceptual framework conceptualizes the relationship between the dependent and independent variables.

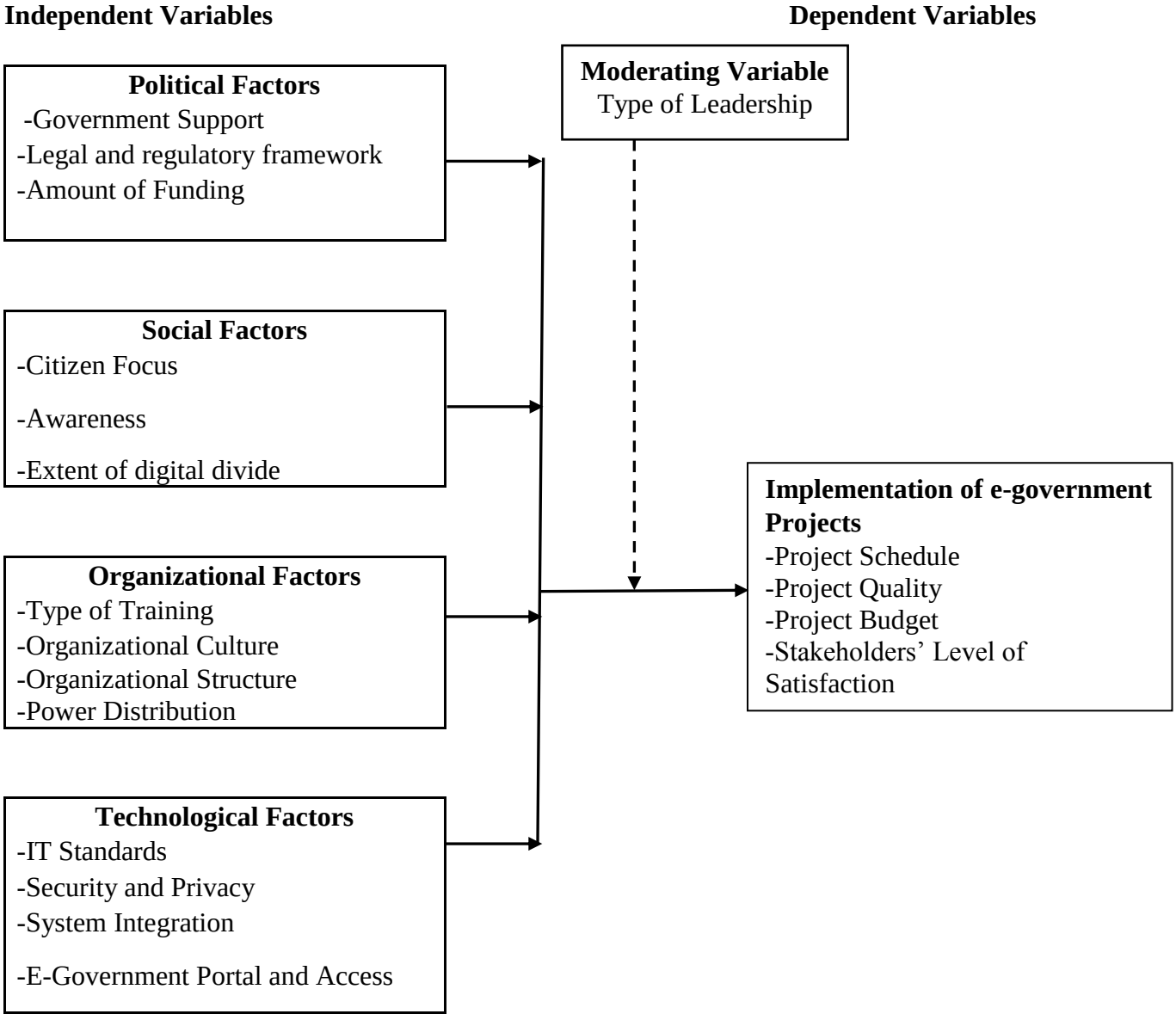

Fig. 1. Conceptual Framework

In this study, the independent variables were organizational factors, political factors, social and technological factors. The indicators of the political factors were government support, leadership,

legal and regulatory framework, and funding, while the indicators of organizational factors were organizational structure, power distribution, organizational culture and training. Additionally, the indicators of social factors included citizen focus, awareness and extent of digital divide while indicators of technological factors were IT standards, security and privacy, system integration and e-government portal and access.

The dependent variable in this study was implementation of e-government project and its indicators were project schedule, project budget, and project quality and stakeholder satisfaction.

2.5 Research Gaps

The exhaustive review of past literature both theoretically and empirically highlighted a number of gaps which the present study attempted to fill. In the literature review although the factors that were identified as affecting the implementation of e-government projects included organisational, technological, social and political factors, most studies only dwelt on few indicators on of these factors. For example, although Al-Shehry et al., (2006) proved that changes in the organizational structure can make e-government implementation hard, the study did not show how changes in the organizational structure intertwine with other organizational factors as one indicator cannot work independently. The same was proved by Doherty and King (2005), and Choudrie and Weerakkody (2005).

In addition, some of this researches for example Irani et al., (2005) do not discuss indicators in the context of e-government implementation. Further, although Al-Kaabi (2010) explores issues that relate to the failure of e-government implementation, the study failed to show how technological factors were connected to social setting of an organization in an e-government system. Therefore, this research study endeavoured to establish the connections that existed between difference indicators of the factors that influence the implementation of e-government projects and how they affect the implementation of e-government projects. Further, although there were numerous studies that had been done on this topic, there was no documented study that was based on the stated factors in the Kenyan Context. As a result, the study using data from the field strived to offer a working definition that may be important by e-government project managers in the Kenyan context, in addition to isolating and pinpointing facts that are applicable in the Kenyan context.

Table 2.1 Summary of Empirical review

Author	Topic	Methodology	Findings	Research gaps
Organizational Factors and implementation of e-government projects				
Al-Shehry *et al.* (2006)	The Motivations For Change Towards E-government Adoption: Case Studies From Saudi Arabia	A qualitative approach (exploratory study using case studies) was used in this study	Re-engineering of work process may result in change of organizational structure which may in turn cause resistance to change	The study did not discuss other organizational factors that affect implementation of e-government projects apart from organizational structure
Doherty and King (2005)	From Technical to Socio-Technical Change: Tackling the Human And Organizational Aspects of Systems Development Projects	The study was administered using questionnaires after sampling was done	-Employees resist change if a new IS/IT system threatens their power and control -Training is fundamental during implementation of new E-Systems	This study ignored other organizational factors such as training and power distribution and their effect on implementation of e-government projects
Irani *et al.*, (2005)	Transaction Stage of e-Government Systems: Identification of its Location & Importance	Case studies were used in this study	Implementation of a new IS systems causes a change in organizational culture which in turn affect the adoption of ICT systems	The topic of organizational culture was not studied in the context of e-government projects.
Weerakkody and Choudrie (2005)	Exploring E-Government in the UK: Challenges, Issues and Complexities	Exploratory research design was used in this study.	-A new IS/IT may cause organizational change and shift of power within the organization, which may result in user resistance -Training and education promote adoption of e-government implementation	In this study, organization culture and structure as some of the organizational factors that affect the implementation of e-government systems was not considered
Technological factors and implementation of e-government projects				
Khanh (2014)	The critical factors affecting E-Government adoption: A Conceptual Framework in Vietnam	Survey questionnaires were used in this study. 450 public employees were interviewed	Unreliable systems integration and lack of IT and legal infrastructure are obstacles to implementation of e-government projects	In this study other technological factors such as IT standards, security and privacy among other factors were not discussed
Al-Kaabi (2010)	Secure and Failure Factors of e-Government Projects Implementation in Developing Country: A study on the Implementation of Kingdom of Bahrain	Well-structured questionnaires were used for interviews	without IT standards, proper system integration, and accessibility of e-portals everything in an e-government structure will be in disarray	The study failed to show how technological factors were connected to social setting of an organization in an e-government system

Smith and Jamieson, (2006)	Determining key factors in e-government information system security	Structured interviews were used in this research	Security and privacy is one of the key challenges for implementation of an e-government system	This study focused on security and privacy in the context of e-government implementation, but did not discuss anything on e-government portal and access
Joia, 2007	Sources of resistance to G2G endeavors: Evidence from a case study in the Brazilian context	The case study methodology based on a recent real-life cases was used in this study	Incompatible hardware and software that may not integrate and work together due to poor IT standards impair implementation of e-government projects	In this study security and privacy among other factors are not mentioned as one of the factors that affect the implementation of e-government projects
Social factors and implementation of e-government projects				
Al-Omari and Al-Omari, 2006	E-Government Readiness Assessment Model	This study used a descriptive research design	Lack of awareness might prevent the citizen from participating in e-government services	In this research, citizens' focus as a factor that influences the implementation of e-project was ignored
Misra (2007)	Defining E-government: A Citizen-centric Criteria-based Approach	a descriptive research design was used in this research	Citizen-centric government is one of many important criteria that make e-government unique from traditional forms of service delivery	In this research, other social factors that affect the implementation of e-government projects were not discussed
Bwalya (2009)	A Policy making view of E-Government Innovations In Public governance	Case studies and descriptive research design were used in this study	Lack of awareness by employees and poor attitudes towards e-government projects was the greatest impediment to the implementation process	This study widely discussed most social factors that influence the implementation of e-government projects, but ignored the role played by the extent of digital divide
Alomari, Sandhu and Woods (2010)	E-Government Adoption in the Hashemite Kingdom of Jordan: Factors from Social Perspectives	This research used exploratory factor analysis using surveys on 400 Jordanian citizens	Lack of awareness and low internet knowledge was one of the primary factors that hindered the successive implementation of e-	Awareness as one of the factor that affect the implementation process were not discussed

			government projects	
Al-Shboul, Rababah, Al-Shboul, Ghemat and Al-Saqqa (2014)	Challenges and Factors Affecting the Implementation of E-Government in Jordan	Semi-structured interviews were used to collect the data whereby 12 governmental agencies and 36 persons did the interviews	Proper training and provision of computer literacy lessons can help to reduce the extent of digital divide gap	This research study dwelt a lot on social factors that affect the implementing processes, ignoring other factors that affect this process
Political factors and implementation of e-government projects				
Kim, Kim and Lee., (2009)	An institutional analysis of an e-government system for anti-corruption: The case of OPEN	A single case study through semi-structured interviews among civil officials was used	The regulatory **di**mension and strong leadership are crucial to the success projects	This study focused a good case on factors that affect an e-government systems, but did not establish a connection to the implementation process
Ebrahim and Irani (2005)	Challenges to the Successful Implementation of e-Government Initiatives in Sub-Saharan Africa: A Literature Review	This study used a descriptive research design	Over half (57.1%) of US's city and county governments' e-government projects faced implementation challenges due to lack of enough funding	Government support and legal and regulatory framework were not identified as factors that affect the implementation of e-government projects.
Abbasi (2005)	Capacity Building and Institutional Framework for e-Governance	This study used a descriptive research design	Proper leadership structures, government support, political goodwill and legal and regulatory issues are essential at all levels of e-government implementation	This research fails to connect how political factors influence leadership structures, which in turn determine how e-government projects will be implemented
Bwalya (2009)	Factors Affecting Adoption Of E-Government In Zambia	This study used case studies	Without proper support in terms of funding, there was a zero percent probability of any e-government project succeeding.	This research study examines factors that affect e-government projects in Zambia generally without focussing specifically on the implementation process

2.6 Summary of Chapter Two

This chapter has provided existing literature on the highlighted four factors affecting the implementation of e-government projects that include organizational, social, political and technological factors. Three theories namely Diffusion of Innovation Theory, Technology Acceptance Model, Actor-Network Theory (ANT) were discussed. The Actor-Network Theory has

been selected as the most relevant theory in this research study. Finally, the chapter identified research gaps from studies conducted by other scholars in related fields of study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter examines the research design that was used, the target population, sample size, research instruments as well as data collection procedures. It also presents the tools that were used for data analysis, presentation and interpretation. The chapter further examines ethical considerations and includes a table showing the operationalization of variables. Justifications on the choice of the methods and tools used is also provided.

3.2 Research Design

A descriptive research design was used in this research study. Descriptive research design is a process of gathering data via interviews or by using a questionnaire. This research design was preferred as it provides precise information of persons, events and account of characters. Additionally, it was preferred as it enabled in depth collection of information about the population being studied. Yin (2009) claims that this method is preferred in research as allows one to present data collected from numerous approaches for instance surveys and document review in an endeavour to give a comprehensive story of events. Additionally, a descriptive study can help a researcher to get information on the present status of occurrences depending on the prevailing conditions (Burns and Grove, 2003).

3.3 Target Population

The target group is the entire set of individuals from which a researcher will select respondents and to which conclusions will be generalized (Burns & Bush, 2009). The target population for this study was 90 employees from the departments that were represented in the two selected Pasha Centres (Dagoreti Empowerment Centre and Dagoreti Digital Village) in Dagoreti South Sub-County. This is because of the common characteristics that are the subject matter of this study. Since the purpose of identifying the target population was to ensure that the aggregate of all elements that were selected addressed the research questions adequately, the research purposely targeted employees in the registry section of all the departments. The total number of 90 was distributed as shown in Table 3.1

Table 3.1 Distribution of Target Population per Department

Pasha Centre	Department	Target Population
Dagoreti Empowerment Centre	Training	21
	Administration	8
	IT Support	21
	Library	6
Dagoreti Digital Village	Administration	6
	IT Support	8
	Support Staff	4
	Training	16
Total		**90**

3.4 Sample size, Sampling techniques and Sampling Procedures

A sample of 48 respondents were picked from the departments represented in the two Pasha Centres that were under study in order to increase the confidence level and reduce the margin error. The sample size was made up of all departments that were involved in direct implementation of the Pasha Centres in Dagoreti. Stratified sampling was used in this study. This is because subjects for the study were picked per department as they share attributes. These were termed as strata for the purpose of this study. Each stratum was sampled independently randomly. This was done in order to guarantee that every subject had an equal chance of being picked.

This sampling technique was used as it helped to make sure that there were no segments that were overrepresented or underrepresented. This is in agreement with Ahmed (2009) that any selected sampling method should always make sure that all research units are equally represented during sampling and the method chosen should help to minimize sample selection bias (sampling error). In this research, 75% of one of the stratum and 50% of the other stratum were picked as the sample. The sample size selected satisfied the condition of sampling which as quoted by Mugenda & Mugenda, (2003), a sample size representing 20% to 30% of the total population is enough to allow for generalization of characteristic under investigation. Therefore, 48 respondents formed the sample size of this study and they were calculated as shown in Table 3.1.

Table 3.2 Sampling Frame

Pasha Centre	Departments	Population (N)	Sample Size(n)
Dagoreti Digital Village	Administration	6	4
	IT Support	8	4
	Support Staff	8	4
	Training	16	8
Dagoreti Empowerment Centre	Training	21	12
	Administration	8	4
	IT Support	9	5
	Library	14	7
Total		**90**	**48**

3.5 Research Instruments

This section examined the various research instruments that were used to collect data. A questionnaire was used to collect data. A questionnaire was chosen because of its ability to provide uniformity and it enhanced privacy hence respondents were likely to give honest answers. In addition, it can be used to reach a large sample at the same time (Bloch, Phellas, & Seale, 2011).

3.5.1 Pilot Study

According to Mugenda and Mugenda 2003, in a pilot study a sample comprising of 10% of the total sample is right for a pilot study as long as it has the same characteristics as population under study. For this study, 8 respondents (16% of the sample size) one from each departments of the two Pasha Centre were interviewed for the pilot study. Before the actual research, consent was sought from the administration of the two centres and from the interviewees. After this, the pilot study was done three weeks before the actual study. During the pilot study, the respondents were explained the primary goal of the study, after which the questionnaires were administered after assuring them of confidentiality. After a week the same respondents were requested to respond to the same questionnaire but without any notification for checking of variations in responses. The pilot study was important as it helped to identify vague questions and unclear instructions.

3.5.2 Validity

Validity is the level to which a research tool measures everything it purposes to measure. Validity is used to establish if the obtained results meet all the requirements of a research method by analysing the appropriateness, meaningfulness and usefulness of a research study (Golafshani, 2003). In this study, content validity was used to assess the validity of the instruments. In order to test validity, five

questionnaires were issued to professionals in the area of research at the University of Nairobi and the supervisor for assessment of the specificity and clarity of the questionnaires. After this, the provide guidance and recommendations were used to correct the questionnaire.

3.5.3 Reliability

Reliability analysis measures the overall constancy of a measure. Reliability measures the degree to which the research instruments are without bias and give consistence results over time based on the same conditions and method of data collection (Carlson, 2009). In this research study, reliability of research instruments was tested using the Test-retest method as it offers an easy method of communicating to respondents. This was done by administering the same questionnaire twice to respondents after allowing a period of two weeks between the first and second administering. After obtaining data from the field, the statistical package SPSS helped to calculate the Cronbach's Alpha Coefficient. From the analysis using SPSS, the Cronbach's Alpha Coefficient was 0.8; hence, a good reliability scale.

3.6 Data Collection Procedures

Two weeks after the pilot study, the actual data collection was done. Before the actual data collection, the research got a research licence from the National Council for Science and Technology to facilitate carrying out of the study in in Dagoreti South Sub-County. Additionally, authority was sought from the University of Nairobi. To help in the research, four research assistants were engaged to help with data collection. After working on the logistics for this research, the research assistants were trained on interviewing skills and data collection procedures. To ensure that respondents participated freely in the research, the assistants made the respondents to understand the significance of the study and assured them of the confidentiality of the information that they gave. Data was collected within three weeks as some respondents took more time to complete the questionnaires. During this period follow ups were done via telephone calls in order to increase the return rate. Data collected was corded and prepared for analysis after data cleaning was done by removing incomplete questionnaires. Coding was done in the field and later decoding after data collection for data entry.

3.7 Data Analysis

Data analysis involves checking, cleaning, modelling, and evaluating data using analytical methods with a primary goal of making inductive conclusions from data and differentiating the phenomenon of interest from statistical fluctuations that are in the research data. Additionally, data analysis can help to restructure findings from different sources of data and give new insights out of a large quantity of data. By doing this, the research objectives will be fulfilled and appropriate answers to

research questions will be offered (Burnard et al., 2008; Manikandan, 2011). Following data collection, decoding of data was done followed by cleaning of the data and then data entry. This was followed by categorization, manipulation and summarizing in view of the research questions using SPSS. After data analysis, the descriptive statistics results was presented using the arithmetic mean and standard deviation in tables. The arithmetic mean as a measure of average and the standard deviation as a measure of dispersion was used as they are consistent with the descriptive research design that was adopted in this research study.

3.8 Ethical considerations

To ensure that this research presented a true reflection of the factors that influence the implementation of e-government projects in Kenya, clearance for data collection was got from the University of Nairobi and the National Commission for Science, Technology and Innovation. Additionally, all those who participated in this research were assured that all information they gave was to remain confidential. Further, the research was done in openness and integrity. On the other hand, the four research assistants that helped in data collection were trained on the best way of administering questionnaires to respondents while respecting their rights.

3.9 Operational Definition of Variables

Different variables were measured using different approaches. Table 3.2 outlines the relevant measures and their corresponding operational definitions.

Table 3.3 Operational Definition of Variables

Research Objective	Indicators	Scales of Measurement	Research Design	Data Analysis Tool
To assess the influence of political factors on implementation of e-Government projects	Government Support	Nominal	Descriptive	Arithmetic mean, standard deviation
	Legal and regulatory framework	Nominal		
	Amount of Funding	Ordinal		
To establish the influence of social factors on implementation of e-Government projects	Citizen focus	Nominal	Descriptive	Arithmetic mean, standard deviation
	Awareness	Nominal		
	Extent of digital divide	Nominal		
To determine the influence of organizational factors on implementation of e-Government projects	Organizational culture	Nominal	Descriptive	Arithmetic mean, standard deviation
	Power distribution	Nominal		
	Organizational structure	Nominal		
	Type of training	Nominal		
To determine the influence of technological factors on implementation of e-Government projects	IT standards	Nominal	Descriptive	Arithmetic mean, standard deviation
	Security and Privacy	Nominal		
	System integration	Nominal		
	E-government portal access	Nominal		

CHAPTER FOUR
DATA ANALYSIS, PRESENTATIONS AND DISCUSSIONS

4.1 Introduction

This chapter presents the findings of the study as per the objectives of the study. The thematic subsections that were explored in this chapter include the respondents' profile, political factors and implementation of e-government projects, social factors and the implementation of e-government projects, organizational factors and implementation of e-government projects, and technological factors and implementation of e-government projects. In this the analysis results are presented and interpretations and discussions done. The mean and standard deviation were used to present the findings whereas these results were presented in tables.

4.2 Response Rate

Out of the 48 questionnaires that were given to respondents, only 39 were returned; hence, a response rate of 82%. This response rate was acceptable for data analysis and it is in line with Mugenda and Mugenda (2003) proviso that a response rate of above 70% is enough for generalization of findings.

4.3 Profile of Respondents

The respondents' information that was considered in this study included the name of the organization, department of work, and the length of continuous service with the organization.

4.3.1 Organization of the Respondents

In order to establish the organization of the respondents as it helped to ascertain how close the sample replicated the population under study, respondents were asked to state the organizations they work in. The results are presented in Table 4.1

Table 4.1 Respondents' Respective Organisation

Organization	Number of Respondents	Percentage
Dagoreti Digital Village	17	44
Dagoreti Empowerment Centre	22	56
Total	**39**	**100**

As per the findings, 17 respondents were from Dagoreti Digital Village while 22 respondents Dagoreti Empowerment Centre.

4.3.2 Department of Work of Respondents

In order to differentiate between the different sub-groups that were under study and collect meaningful data on their involvement in the implementation process, respondents were requested to specify the departments they worked in the Pasha Centres. The results are presented in Table 4.2

Table 4.2 Respondents' Department of Work

Name Of Organization	Department	Number of Respondents	Percentage
Dagoreti Digital Village	IT Support	4	10
	Administration	3	8
	Support Staff	2	5
	Training	8	21
Dagoreti Empowerment Centre	Administration	4	10
	Library	7	18
	Training	8	21
	IT Support	3	8
Total	**8**	**39**	**100**

4.3.3 Service in the Organization

This section of the questionnaire sought to find out the length of time the respondents had served the two Pasha Centres. Determining the length of continuous service with the organization was important as it revealed respondents' experience in the implementation of e-government systems. The results are presented in able 4.1.

Table 4.3 Length of Continuous Service with the Organization

Year	Frequency	Percent	Cumulative Percent
Less than 1	1	2.6	2.6
1 – 3	29	74.4	76.9
4 – 6	9	23.1	100
Total	**39**	**100**	**100**

The results show that 74.4% of the respondents indicated that they had served the Pasha Centres for a duration between 1-3 years, 23.1% of the respondents indicated that they had worked in the organizations for a period of between 4-6 years, while 2.6% of the respondents had worked in the Pasha Centres for a period of less than 1 year. Therefore, results of this research revealed that respondents had served the two pasha centres for more than three years. From this it is clear that they understood the nature of services that were offered in the Digital Villages.

4.4 Implementation of e-government Projects

From research findings, it was proved that there was no new e-government related project that was being implemented by the first Pasha Centre that was under study. Although this Pasha Centre is complete, study findings revealed that implementation of this project extended its original schedule by almost three months before it was fully functional. As a result of the extension, the project cost more than was budgeted for due to discovery of new requirements that were not budgeted for early. In addition to the project extending, respondents revealed that at one point due to lack of adequate funds, the implementation process stalled for more than three months until more funds were got. Some of the new issues that the Pasha Centers encountered during implementation included license fees, high cost of equipment and lack of the required technical expertise.

Respondents also revealed that previously during the inception of the project, they did not have clear guidelines and the required training on what was expected by the government apart from the simple training and guidelines that they received from the ICT Authority. Although developing and implementing a quality Pasha Centre was one of the primary goal of the implementers of Dagoreti Empowerment Centre, respondents revealed there were no quality metrics that they used to measure progress and development during the entire implementation process. Additionally, the respondents revealed there were no metrics for measuring stakeholders' satisfaction as the only metric that was used to measure satisfaction was the increased number of people that the Pasha Centre served.

Further, findings it was discovered that unlike in the first Pasha Centre, the second Pasha Center that was under study runs currently with only minimum requirements and there was no new e-government project that was being implemented. As a result, its implementation has dragged for more than two years since it was scheduled for completion. Although there were no clear records to show how much had been spent on the project, respondents revealed that the project's budget had been over stretched because from time to time more money had to be sourced as the original amount that was allocated for the project had been exhausted. Some of the reasons that were blamed for failure of this project to be implemented on time included poor budgeting and lack of the required technical expertise that was necessary for its implementation. Additionally, the respondents revealed that there was lack of goodwill from the government in terms of offering more support and funds in form of loans as the original loan which was owed had not been paid.

Unlike in Dagoreti Empowerment Centre where there was lack of quality metrics, Dagoreti Digital Village had set key performance indicators for quality. These included testing of the percentage of product that was compliant with specifications, on time completion of the project within the set

budget, and testing the overall effectiveness of the equipment that had been set. Although this was in place, respondents felt that little had been achieved as the project was operating with only minimum requirements and the cost of the project had exceeded what was budgeted for. In terms of key performance indicators for stakeholders' level of satisfaction, research findings revealed that there was none in place.

4.5 Political Factors and Implementation of e-government Projects

The study establish how different political factors influenced the implementation of e-government projects, respondents were asked to state how the legal and regulatory framework, government support, and funding influenced the implementation of e-government projects. Table 4.4 shows the influence of different political factors on implementation of e-government projects.

Table 4.4 Political factors' Influence on Implementation of e-government Projects

Political factors	Mean	Std. Deviation
Amount of Funding influences project quality	4.79	0.52
Amount of Funding influences project budget	4.76	0.53
Amount of Funding influences project schedule	4.69	0.65
Amount of Funding influences project stakeholders' level of satisfaction	4.64	0.7
Government support influences project stakeholders' level of satisfaction	3.64	0.81
The existing legal and regulatory framework influences project quality	3.64	0.95
Government support influences project budget	3.56	0.94
The existing legal and regulatory framework influences project stakeholders' level of satisfaction	3.56	0.71
Government support influences project quality	3.51	0.91
The existing legal and regulatory framework influences project schedule	3.46	0.94
The existing legal and regulatory framework influences project budget	3.38	1.04
Government support influences project schedule	3.07	1.06
Composite Mean/ Standard Deviation	**3.89**	**0.81**

Findings revealed that although generally political factors significantly influence the implementation of e-government projects (aggregate mean=3.89), among political factors, the amount of funding had the most significant influence on a project's quality, budget, schedule and stakeholders level of satisfaction (mean= 4.72). This can be attributed to the fact without enough funds right from execution to the completion of a project, there is little that implementers can do. When it comes to e-

government projects, the scenario may become worse due to the numerous systems that should be developed, the nature of expertise that is required and nature of infrastructure must be provided for an e-government system to be functional. Considering this, enough funding should be provided for an implementation process to be a success.

Additionally, results of this research study discovered that government support also has a significant influence on the stakeholder's level of satisfaction (mean=3.64), project budget (mean= 3.56) and a project' (mean=3.51). Although respondents agreed that governmental support influences a project stakeholders' level of satisfaction, project budget and quality, the respondents were neutral on the influence of governmental support on the project schedule (mean=3.07). Governmental support can be inform of provision of the required infrastructure and systems. Further it can also be inform of sponsoring start-ups more so where innovators lack enough funds to make the plans a reality. When there is little government support, implementation of most e-government projects is a great challenge as this projects require lots of funds inputs before they become operational.

Further, findings of this research also revealed that the existing legal and regulatory framework has a significant influence on the implantation of e-government as it influences a project's quality with a mean of 3.64, stakeholder's level of satisfaction with a mean of 3.56, and a project's schedule with a mean of 3.46. Although this is the case, respondents were neutral on how the existing legal and regulatory framework influences a project's budget. For an e-government system to be able to serve its citizens well, it should be regulated and well managed in order to ensure that it is not misused. As a result, for this to happen a proper set of rules and regulations need to exist to direct its usage and these rules should be followed by all the involved parties, right from those who develop it to the recipients of the system.

Failure to have this can cause numerous quality problems right from the nature of the system being developed, the services offered through e-government platforms and the overall usage of the systems. Further, a system that is developed without a clear legal framework that will manage its every function can lead to low stakeholder satisfaction and eventual failure of such systems. Although the outcomes of this research indicated that there is no direct connection amongst the existing legal framework and a project's budget, it is worth noting that lack of sound rules and regulations can lead to overstretching of a project's funds as most users and implementers may end up messing up a developed system hence high maintenance and development costs.

It is worth noting that, although the increased use of the internet and advancements in the world of technology has provided most governments with an easy way of offering important services to their

people, the implementation of these systems come with numerous challenges due to the numerous requirements that should be in place for them to work well. That is, although an e-government system offers a mechanism through which those in power can relate with those that they are supposed to serve in order to enhance the development of positive relationships, implementation of such projects can be a daunting task. Further, although most researchers associate such systems with numerous advantages, most of them require collaboration between different stakeholders.

Research findings from this study were consistent with Abbasi (2005) findings that proved that government support, a conducive political environment and the presence of a supportive legal and regulatory frameworks can help to transform the entire public service delivery process. The findings also conformed to Kim et al., (2009) findings on the significance of a proper legal framework and strong leadership for a project to succeed. Further, the findings also agree with Irani (2005) research findings in the USA where it was found that most e-government project faced implementation challenges due to lack of enough funds.

4.6 Social Factors and Implementation of e-government Projects

To establish how social factors affect the implementation of these projects, respondents were requested to show how different social factors influence the implementation of e-government projects. Social factors that were under study include citizen focus, level awareness and extent of digital divide. Table 4.5 shows the influence of different social factors on the implementation of e-government projects.

Table 4.5 Social Factors' Influence on Implementation of e-government Projects

Social Factors	Mean	Std. Deviation
Level awareness influences project schedule	3.74	0.84
Level awareness influences project budget	3.66	0.7
The extent of digital divide influences the project stakeholders' level of satisfaction	3.61	0.81
Citizen focus influences project stakeholders' level of satisfaction	3.48	0.93
Level awareness influences project quality	3.46	0.78
Level awareness influences project stakeholders' level of satisfaction	3.43	0.85
The extent of the extent of digital divide influences the project quality	3.43	0.94
Citizen focus influences project budget	3.41	0.81
Citizen focus influences project quality	3.41	0.88
The extent of digital divide influences the project schedule	3.38	0.87
The extend of the extent of digital divide influences the project budget	3.28	0.97
Citizen focus influences project schedule	2.89	0.68
Composite Mean/ Standard Deviation	**3.42**	**0.84**

Results of this research revealed that different social issues significantly influence the implementation of e-government. Among social factors, the level of awareness had the most significant influence as at it significantly influenced a project's schedule (mean=3.74), budget (mean=3.66), quality (mean=3.46) and a project's level of stakeholder's satisfaction (mean=3.46). When it comes to implementation of e-government projects, implementers should ensure that those such as system is supposed to serve know of its existence and functions. This is due to the fact that if the recipients of the system know of its existence and how it functions they can help to audit the system and suggest areas that need fixing before it's officially used. With such inputs from the users, the quality of such system can be greatly improved and this in turn will help to reduce the amount of funds that are likely to be used in the implementation process. Good levels of awareness can also increase the rates of adoption which in turn will make the implementation process easy.

In addition, findings of this study revealed that among social factors, the extent of the digital divide also had a significant influence on the execution of this projects, specifically on the stakeholders' level of satisfaction (mean=3.61) and project quality (mean=3.43). Contrary to this, respondents were neutral on the influence of the existing extent of digital divide on a project's schedule (mean=3.38) and budget (mean=3.28). As a result of this, individuals who have access and utilize

this e-government platforms are people who are aware of the significance of such systems and the convenience of such. If the extent of the digital divide is big, the adoption of an e-government system will be very low and lack of this can lead to low levels of stakeholders' satisfaction with an e-government platform. Additionally, when the extent of the digital divide is big in a society or county, the likelihood of implementers catering for the needs of most citizens will not possible and this may lead to quality problems as there is no meaningful improvement feedback will be got from such societies.

Further, results of this research study revealed that citizen focus as one of the social factors had a significant influence on the stakeholders' level of satisfaction (mean=3.48) and project and quality (mean=3.41). Even though this was the case, respondents were neutral on the influence of citizen focus on a project's schedule. Since an e-government system is supposed to offer services to the public, it is necessary that such services be citizen-centric as this is the only way of making sure a system serves its purpose. Failure to do this can lead to low levels of satisfaction and this may directly affect the implementation process, more so when implementation is done in phases. Additionally, if an e-government system is not citizen friendly, then value of that system may be compromised, because low level of satisfaction means that an e-government system does not meet the required quality threshold. Further, if an e-government does not meet certain quality thresholds, the implementation of such a system may overstretch the budget, as more funds may be needed from time to time to fix the system.

Findings of this research are in agreement with Al-Omari (2006) study in the Jordanian government where it was found that some e-government projects had stalled as a result of both implementers and users lacking the required level of awareness that is required in these projects. In addition, the findings agreed with Bwalya (2009) research findings in Zambia where Bwalya proved that that Zambia's most e-government platforms had failed due to lack of awareness of its employees. Further, as Misra (2007) argues, although e-government technology has encouraged governments and other organizations to restructure how there public service delivery systems integrate and work, the implementation of e-government projects is significantly influenced by social factors like extent of digital divide , level of citizen awareness and citizen focus, as these are the primary factors that affect stakeholders' satisfaction; hence, social factors have a notable effect on the implementation of e-government projects.

4.7 Organizational Factors and Implementation of e-government projects

Organisational factors that were under study include the type of training, organisational culture, power distribution, and organisational structure. The outcomes are presented in Table 4.6

Table 4.6 Organizational Factors' Influence on Implementation of e-government Projects

Organizational Factors	Mean	Std. Deviation
Type of training influences project stakeholders' level of Satisfaction	4.21	0.95
Organizational culture influences project implementation quality	4.03	0.9
Type of training influences project implementation schedule	3.95	0.79
Type of training influences project implementation quality	3.94	0.88
Type of training influences project implementation Budget	3.93	0.89
Organizational structure influences project implementation quality	3.87	0.86
Power distribution influences project implementation quality	3.87	0.86
Organizational culture influences project stakeholders' level of satisfaction	3.87	0.86
Organizational culture influences project implementation schedule	3.84	0.9
Organizational culture influences project implementation budget	3.82	0.68s
Organizational structure influences Schedule	3.69	0.65
Power distribution influences project's stakeholders level of satisfaction	3.64	0.81
Power distribution influences project implementation budget	3.61	0.91
Power distribution influences project implementation schedule	3.61	0.91
Organizational structure influences project budget	3.4	0.83
Organizational structure influences stakeholders level of satisfaction	3.3	0.79
Composite Mean/ Standard Deviation	**3.79**	**0.84**

From the results, it is clear that respondents agreed that organizational factors significantly influences the implementation of e-government projects. Among organizational factors, the type of the training had the most significant influence on the stakeholders' level of satisfaction (4.21). Respondents also agreed that the type of training considerably influenced the project schedule and a project's quality (mean= 4.03 and 3.94 respectively). Equally, respondents also agreed that the nature of training a big effect on a project's budget (mean=3.88). Due to the increased developments in the ICT world, sometimes users of a system may lack the required set of skills that is required to operate some systems. Considering this, without proper and relevant training on e-government processes any implementation process can be put in jeopardy. Training offers new learning opportunities and

insights that are necessary in an e-government implementation process. In an e-government set up, employees and users of an e-government system should have the required skill set in order to be able enjoy full benefits of the system.

In addition to the type of training, findings of this research also revealed that organizational culture had a significant influence on implementation quality (mean=4.03), stakeholders' level of satisfaction (mean=3.87), schedule (mean=3.84) and budget (mean3.82). Implementation of an e-system may sometimes necessitate an overhaul of an organization's routine. If such changes are appreciated by all employees in an organization, then the implementation process will be smooth. However if such changes are rejected the entire implementation process will be in jeopardy, because some employees or recipients of a system may do anything to make sure that it fails. Failure of an implementation will translate to project delays, over- spreading of the budget and even compromise on quality. As a result, it is important for implementers to always come up ways of mitigating such from happening.

Likewise, findings of this study also revealed that organizational structure influences a project's quality (mean=3.87) and stakeholders' level of satisfaction (mean=3.69). Contrary to this, respondents were neutral on the influence of organization structure on a project's budget and schedule (mean=3.3 and 3.4 respectively). This may be the case because implementation of an e-government system sometimes necessitate al alteration of the organization structure as some functions may be combined as some are restructured. Such changes may change how an organization separates responsibilities which hold the entity together. If such changes are taken positively then the implementation process will be smooth and a success, but if such changes bring discord in an organization then the quality and level of satisfaction will be very low leading to implementation problems.

Further, findings of this study revealed that power distribution within an organization has a significant influence on a project's quality (mean=3.87), and project schedule (mean=3.64). Further, as per respondents, although power distribution has a significant influence on a project's budget (mean=3.61), and stakeholders' level of satisfaction (mean 3.61), the influence is not as significant when compared to other organizational factors. This can be the case adoption of e-systems may lead to change of status of different employees of an entity. If such a scenario happens and some employees feel powerless, then a revolt that will be very detrimental to the implantation process may result. In scenarios where there are no mechanisms of dealing with revolts, then a project's quality and delivery schedule may be significantly affected.

From this results it is clear that there is need for the government and the Digital Villages to restructure existing organizational models, roles, and responsibilities in order to avoid any conflicts that may arise in an entity as a result of implementation of new e-government initiatives. It is worth noting that, unless factors such as training, organization culture, organizational structure and power distribution are handled well, chances of an implementation process failing are high. Research findings of these study agree with Irani et al. (2005) research findings that e-government implementation can be impaired by a number of organizational culture problems or factors that may cause a culture change in an organization. Further, findings from this research agree with Weerakkody and Choudrie (2005) research findings on how lack of enough education and training had impaired the development of e-government systems in the United Kingdom. In addition, findings of this research study also agree with Al-Shehry et al. (2006) research findings in Saudi Arabia where it was found that changes that come with reengineering of work process (change of organisational structure) can lead resistance from employees as most of them may feel that the jobs and position they hold are at risk.

4.8 Technological Factors and Implementation of e-government projects

The study sought to establish how technological factors influence the implementation of e-government projects. Technological factors that were under study include IT standards, security and privacy issues, system interaction and the e-government portal access. The finding are tabulated in Table 4.7

Table 4.7 Technological Factors' Influence on Implementation of e-government Projects

Technological Factors	Mean	Std. Deviation
E-government portal and access influence the project stakeholders' level of satisfaction	4.61	0.54
System integration influences project stakeholders' level of satisfaction	4.58	0.54
System integration influences project quality	4.53	0.34
System integration influences project budget	4.46	0.6
E-government portal and access influence the project schedule	4.46	0.6
E-government portal and access influence the project quality	4.46	0.55
E-government portal and access influence the project budget	4.43	0.59
System integration influences project schedule	4.35	0.58
Security and privacy issues influence the project quality	4.28	0.91
IT standards influence project stakeholders' level of satisfaction	4.25	0.75
Security and privacy issues influence the project budget	4.25	0.88
Security and privacy issues influence the project stakeholders' level of satisfaction	4.25	0.78
Security and privacy issues influence the project schedule	4.23	0.84
IT standards influence project quality	4.17	0.75
IT standards influence project budget	4.1	0.78
IT standards influence project schedule	3.94	0.64
Composite Mean/ Standard Deviation	**4.33**	**0.67**

According to findings, respondents strongly agreed that technological factors influence the implementation of e-government projects (mean=4.33). Among technological factors e-government portal and access has the most significant influence as results proved that it has significant on influences stakeholders' level of satisfaction (mean 4.61), project s schedule (mean 4.46), project quality (mean=4.46) and a project's budget (mean=4.43).

Moreover, from the findings respondents strongly agreed that systems integration considerably influences on the implementation of e-government. This is because the results proved that if affects stakeholders' level of satisfaction (mean=4.85) quality (mean=4.53), budget (mean=4.46), and schedule (mean=4.53) during the implantation process. In addition to e-government portal and access and systems integration, results of this research study proved that the nature of existing IT standards have a significant influence on the implementation of e-government projects. This is due to the fact they influence project stakeholders' level of satisfaction (mean 4.25), quality (mean=4.17), budget (mean=4.1) and schedule (mean=3.94). Further, respondents agreed that security and privacy concerns also significantly influence the implementation of these projects as it was found that it

influences a project's quality (mean=4.28), budget (mean=4.25), stakeholders' level of satisfaction (mean=4.25) and a project's schedule (mean=3.94).

From the findings, it can be concluded that technological factors have the most significant influence on the implementation of e-government project. This is so because, all e-government platforms are built on IT systems without which an e-government system won't be termed as a system. A proper and reliable IT infrastructure creates an enabling environment for service delivery and for this to happen there should not only accessible e-portals, but also functional and easily navigable ones. In addition to this, it is important for such portals to be secure so that all private data that is fed into them remains safe without this, it is very hard for people to adopt an e-government system and lack of adoption will automatically lead to implementation failure. For security and privacy to be ensured, proper IT standards should be put in place not only during development and implementation but also during use. For this to be possible a clear legal framework should be in place as this is the only ways of ensuring that all the required IT standards are in place.

Most e-government systems must properly integrate for them to deliver the required standards of services. As a result there is need for proper infrastructure and standards to be in place in addition to making sure that governmental portals are accessible for implementation of e-systems to be a success. In addition to this, all IT systems should be integrated heterogeneously whereby backend computer systems are brought together for construction of a functional system. This systems should be able to link different departments and make sure that all departmental functions work in unison. Without this in place, problems of data flow can results leading to failure of this systems, something that is likely to impair successful implementation. Outcomes of this research also agreed with Al-Kaabi (2010)'s findings that without information technology standards and proper system integration, everything in an e-government structure may be dysfunctional. The findings also agreed with Jamieson and Smith (2006) research findings that that security and privacy issues can result in failure of any implementation endeavour.

CHAPTER FIVE

SUMMARY OF KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The research study aimed to examine factors that influence implementation of e-government projects in Dagoreti South Sub-County, Kenya. This chapter therefore examines the summary of key findings, conclusions drawn and recommendations derived from the study. The findings and conclusions are drawn as per the objectives of the study. Finally suggestions for further research are indicated.

5.2 Summary of Key Findings

This section gives a summary of the findings as presented in chapter four of the study. The response rate was 82% and the respondents were from different departments that were represented in the Pasha Centres (IT Support, administration, support staff, training and the library). 74.4% of the respondents served the Pasha Centres for a period between one to three years, while 23.1% had worked in the Pasha Centres for a duration ranging between four and six years, whereas 2.6% had worked for less than one year.

Table 5.1 Summary of the Key Findings

S.No	Research Objective	Indicator	Mean	Average Mean	Composite Std. Deviation
1	To assess the influence of political factors on implementation of e-government projects	Amount Of funding	4.72	3.89	0.81
		Government Support	3.44		
		The legal and regulatory framework	3.51		
2	To establish the influence of social factors on implementation of e-Government projects	Level of Awareness	3.58	3.42	0.84
		Extent of the digital Divide	3.43		
		Citizen Focus	3.24		
3	To determine the influence of organizational factors on implementation of e-government projects	Type Of Training	4.00	3.79	0.84
		Organization Culture	3.89		
		Power Distribution	3.68		
		Organizational Structure	3.57		
4	To determine the influence of technological factors on implementation of e-Government projects	E-government portal and Access	4.49	4.33	0.67
		System Integration	4.48		
		IT Standards	4.11		
		Security and Privacy Issues	4.25		

Although respondents agreed that political factors affect the implementation of e-government projects, findings revealed that the level to which they influence differs. From the findings it is clear that among political factors, the amount of funding had the most significant influence, followed by governmental support and finally the nature of existing legal and regulatory framework.

In addition to political factors, respondents agreed that social factors significantly influence the implementation of e-government project, although just like political factors the level to influence also varies. Among social factors, the level of awareness had the most significant influence followed by the extent of the digital divide and then citizen focus.

Moreover, among organizational factors the type of training was proved to have the most considerable influence on the implementation of e-government projects, followed by organizational culture, organizational structure and finally power distribution.

Outcomes of this research study also proved that technological factors significantly influences the implementation of e-government projects. Among technological factors that were under study, respondents strongly agreed that e-government portal and access had the most significant influence, followed by systems integration, security and privacy issues and then finally IT standards. Therefore, as compared to all factors that influence the implementation of e-government projects, technological factors had the most significant influence. This is because most e-government are built on IT infrastructure and platforms; hence, how they exist, integrate and operate go hand in hand with the working of IT systems.

Further, results of this research study showed that the implementation of the two Pasha Centres had been prolonged due to lack of enough funds and the required support from the government. Additionally, the implementation process was impaired by lack of proper training and expertise as the implementers of the e-systems were not well equipped with the necessary skills before inception of the project. Further, respondents revealed that there was lack of proper metrics for measuring quality and stakeholders' level of satisfaction; hence, determining progress was a challenge.

5.3 Conclusions

The first objective of this research study was to assess the influence of political factors on the implementation of e-government projects. It was found that although different political factors influence the implementation of e-government projects, the amount of funding had the most significant influence (mean=4.72), followed by the legal and regulatory framework (mean=3.51), and then government support (mean=3.44). With a composite mean of 3.89, it is therefore concluded that political factors influence the implementation of e-government project; hence, the need for a project to get enough funds and all kinds of support that is necessary for its success.

From the second objective which was to establish the influence of social factors on the implementation of e-government projects, it was found that among social factors, only two: the level of awareness and the extent of the digital divide significantly influenced the implementation of e-government projects. Respondents were neutral on the influence of citizen focus on the implementation of e-government projects. Additionally, as compared to other factors that influence the implementation of these projects, social factors had the least influence (aggregate mean=3.42). Therefore, with an aggregate mean of 3.42, it can be concluded that although most organizations

thrive in well-structured social systems, the influence of social factors is not very significant as compared to other factors.

The third objective of this study was to determine the influence of organizational factors on the implementation of e-government projects. It was found that organizational factors such as the type of training had the most significant influence (mean of 4.0) followed by organizational culture (mean of 3.89), power distribution (mean of 3.68) and organizational structure (mean of 3.57) in that order. As a result, it can be concluded that with an aggregate mean of 3.79 organisational factors have a significant influence on the execution of e-government projects.

The fourth objective sought to determine the influence of technological factors on the implementation of e-government projects. It proved that e-government portal and access had the most significant influence (mean of 4.49) followed by system integration (mean of 4.48), security and privacy issues (mean of 4.25) and finally IT standards (mean of 4.11). Additionally, it was revealed that among the factors that were under study, technological factors had the most significant influence on the implementation of e-government projects. Therefore, with an aggregate mean of 4.33 it is concluded that technological factors have the highest influence on the implementation of e-government projects.

5.4 Recommendations

1. From testing the first objective that was to assess how political factors influence the implementation of e-government projects, it was found that although all political factors significantly influence the implementation of these projects, the amount of funding had the most significant influence (mean of 4.72). It is therefore recommended that there is need for companies, donors and governments to do realistic planning and allocation of finances to projects in order to limit the probability of a project stalling or going beyond the timeline due to lack of funds.

2. From testing the second objective that sought to establish the influence of social factors on implementation of e-government projects, it was found that the level of awareness and extent of the digital divide had the most significant influence (mean of 3.58 and 3.43 respectively). It is therefore recommended that organizations should endeavour to create the required level of awareness more so when implementing a new e-government system as this is one of the ways of increasing adoption and successful implementation.

3. From the third objective that sought to assess how organizational factors affect the implementation of e-government projects, it was found that the type of training had the most significant influence on

the implantation of e-government projects (mean of 4.0). It is therefore recommended that adequate and relevant training, more so on project management should be offered to project managers and any other individuals that are involved in the implementation process by respective organisations. Additionally, all training needs should be identified immediately after the initiation phase of project and offered appropriately.

4. The fourth objective sought to determine how technological factors affect the implementation of e-government projects. It was found that all political factors that were under study significantly affect the implementation process. As a result, it is recommended that there is need for governments and organizations to develop proper and reliable IT infrastructure which should link and work in unison for a common output.

5.5 Suggestions for Further Research

The following is recommended for further research

1. In this study leadership was identified as a moderating variable hence its relationship with implementation of e-government projects was not established. As a result further research studies should endeavour to establish its influence.

2. From the research it was also established that social factors had the least significant effect on the implementation process. As a result, future studies should try to understand why this is the case for Pasha Centres since without social systems, an IT project cannot stand on its own.

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APPENDICES

Appendix 1: Introductory Letter

Omwenga Walter
P.O Box 3156-40200,
Kisii, Kenya
Mobile: 0721921261
wallyomesh@gmail.com

To whom it may concern,

Ref: Data Collection

I am a student at the University of Nairobi taking a degree in Master of Arts in Project Planning and Management. As part of the requirements of the course, I am required to carry out an independent research; hence, I am currently undertaking a research study on "Factors Influencing the Implementation of e-government projects in Kenya. The study seeks to examine factors influencing the implementation of e-government projects such as organisational, social, technological and political factors.

To enable me successfully carry out the study, a questionnaire is provided to facilitate data collection, which will be the major basis of findings of this research. Your participation in this exercise will be very helpful in carrying out the study to its successful conclusion. The study aims to shed more light on this area of research by contributing more knowledge on implementation of e-government projects.

Thank you in advance for your contribution.

Yours faithfully,
Omwenga Walter

Appendix 2: Research Questionnaire

Research Questionnaire 1: Factors Influencing the Implementation of e-government Projects

This questionnaire has two parts. Section A will be used to obtain general information about the respondent. Section B will be used to generate information on factors influencing the implementation of e-government projects in Kenya.

NB: The data given will be strictly be kept private and nothing you say will be used against you. Your assistance in completing this questionnaire will be highly appreciated.

Kindly respond to the following questions by ticking on the appropriate box [√] or answering the questions as specified.

SECTION A: RESPONDENT'S PROFILE

Please indicate our name and name of your organization below:

1. Name (Optional)……
2. Organization……

[Please tick appropriately]

3. Which department do you work in?.....

4. How long have you been with the organization?

a) Less than 1 year [ ]
b) 1-3 Years [ ]
c) 4-6 years [ ]
d) 6 - 10 years [ ]
e) Over 11 years [ ]

SECTION B: IMPLEMENTATION OF E-GOVERNMENT PROJECTS

5. Various factors such as organizational, political, social and technological factors are reported to influence the implementation of e-government projects in Kenya.

On a scale of 1-5, where 1 represents (Strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree) and 5 (Strongly Agree), please indicate by ticking appropriately how the following factors influence the implementation of e-government projects.

5.0	**Political Factors**	**1 SD**	**2 D**	**3 N**	**4 A**	**5 SA**
5.1	Government support influences project schedule					
5.2	Government support influences project budget					
5.3	Government support influences project quality					
5.4	Government support influences project stakeholders' level of satisfaction					
5.5	The existing legal and regulatory framework influences project schedule					
5.6	The existing legal and regulatory framework influences project budget					
5.7	The existing legal and regulatory framework influences project quality					
5.8	The existing legal and regulatory framework influences project stakeholders' level of satisfaction					
5.9	The amount funding influences project schedule					
5.10	The amount funding influences project budget					
5.11	The amount funding influences project quality					
5.12	The amount funding influences project stakeholders' level of satisfaction					
6.0	**Social Factors**	**1 SD**	**2 D**	**3 N**	**4 A**	**5 SA**
6.1	Citizen focus influences project schedule					
6.2	Citizen focus influences project budget					
6.3	Citizen focus influences project quality					
6.4	Citizen focus influences project stakeholders' level of satisfaction					
6.5	Level awareness influences project schedule					
6.6	Level awareness influences project budget					
6.7	Level awareness influences project quality					

6.8	Level awareness influences project stakeholders' level of satisfaction					
6.9	The Extent of digital divide influences the project schedule					
6.10	The Extent of digital divide influences the project budget					
6.11	The Extent of digital divide influences the project quality					
6.12	The Extent of digital divide influences the project stakeholders' level of satisfaction					
7.0	**Organizational Factors**					
7.1	Organizational structure influences project implementation schedule					
7.2	Organizational structure influences project implementation budget					
7.3	Organizational structure influences project implementation quality					
7.4	Organizational structure influences project stakeholders' stakeholders level of satisfaction					
7.5	Power distribution influences project implementation budget					
7.6	Power distribution influences project implementation quality					
7.7	Power distribution influences project implementation schedule					
7.8	Power distribution influences project stakeholders' level of satisfaction					
7.9	Organizational culture influences project implementation schedule					
7.10	Organizational culture influences project implementation budget					
7.11	Organizational culture influences project implementation quality					
7.12	Organizational culture influences project stakeholders' stakeholders level of satisfaction					
7.13	Type of Training influences project implementation schedule					
7.14	Type of Training influences project implementation budget					
7.15	Type of Training influences project implementation quality					
7.16	Type of Training influences project stakeholders' level of satisfaction					
8.0	**Technological Factors**	**1 SD**	**2 D**	**3 N**	**4 A**	**5 SA**
8.1	IT standards influence project schedule					

8.2	IT standards influence project budget					
8.3	IT standards influence project quality					
8.4	IT standards influence project stakeholders' level of satisfaction					
8.5	Security and privacy issues influence the project schedule					
8.6	Security and privacy issues influence the project budget					
8.7	Security and privacy issues influence the project quality					
8.8	Security and privacy issues influence the project stakeholders' level of satisfaction					
8.9	System integration influences project schedule					
8.10	System integration influences project budget					
8.11	System integration influences project quality					
8.12	System integration influences project stakeholders' level of satisfaction					
8.13	e-government portal and access influence the project schedule					
8.14	e-government portal and access influence the project budget					
8.15	e-government portal and access influence the project quality					
8.16	e-government portal and access influence project stakeholders' level of satisfaction					

Questionnaire 2: Implementation of E-government Projects

1.0. Are you currently undertaking any e-government related project?

Yes (tick) [ ] No [ ]

If Yes, which one _____

2.0 What was the previous e-government project that you implemented or still

Implementing _____

2.1 What was the allocated budget for this project? _____

2.2 How much have you spent so far on the project _____

2.3 Which are the reasons you think might have caused the budget overrun?

I. _____

II. _____

III. _____

IV. _____

V. _____

3.0 How long was the project originally scheduled to run?

_____

3.1 Is the Project Complete?

Yes (tick) [ ] No [ ]

3.2 How long has the project taken or did the project take to completion?

_____

3.3 If the project overrun the schedule, what caused the overrun?

_____

_____

4.0. What were the key performance indicators for quality?

I. _____

II. _____

III. _____

IV. _____

V. _____

4.1 Have you achieved these KPI's towards checking quality?

Yes (tick) [ ] No [ ]

4.2 What do you think might have caused the variance?

I. _____

II. _____

III. _____

IV. _____

V. _____

5.1 What were you Key performance indicators towards ensuring stakeholders are satisfied?

I. _____

II. _____

III. _____

IV. _____

V. _____

5.2 Have you achieved these KPIs'?

Yes (tick) [ ] No [ ]

5.3 What do you think might have caused the variance?

I. _____

II. _____

III. _____

IV. _____

V. _____

Appendix 3: Letter of Authorization from the University Of Nairobi

UNIVERSITY OF NAIROBI
COLLEGE OF EDUCATION AND EXTERNAL STUDIES
SCHOOL OF CONTINUING AND DISTANCE EDUCATION
DEPARTMENT OF EXTRA-MURAL STUDIES
NAIROBI EXTRA-MURAL CENTRE

Your Ref:

Our Ref:

Telephone: 318262 Ext. 120

Main Campus
Gandhi Wing, Ground Floor
P.O. Box 30197
N A I R O B I

14th June 2016

REF: UON/CEES/NEMC/23/395

TO WHOM IT MAY CONCERN

RE: OMWENDA WALTER OBEGI – REG NO L50/82451/2012

This is to confirm that the above named is a student at the University of Nairobi, College of Education and External Studies, School of Continuing and Distance Education, Department of Extra- Mural Studies pursuing a course leading to the award of Master of Arts in Project Planning and Management.

He is proceeding for research entitled **"factors influencing the implementation of E-government projects"** a case of the digital villages (Pasha Centres) in Dagoreti South Sub-county, Kenya.

Any assistance given to him will be appreciated.

CAREN AWILLY
CENTRE ORGANIZER
NAIROBI EMC

UNIVERSITY OF NAIROBI C E E S
P O Box 30197
14 JUN 2016
NAIROBI
NAIROBI EXTRA MURAL CENTRE

Appendix 4: Research Permit from NACOSTI

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No. A 10224

CONDITIONS: see back page

THIS IS TO CERTIFY THAT:
MR. WALTER OBEGI OMWENGA
of UNIVERSITY OF NAIROBI, 3156-40200 Nairobi,has been permitted to conduct research in *Nairobi County*

on the topic: *FACTORS INFLUENCING THE IMPLEMENTATION OF E-GOVERNMENT PROJECTS: A CASE OF THE DIGITAL VILLAGES (PASHA CENTRES) IN DAGORETI SOUTH SUB-COUNTY, KENYA*

for the period ending:
19th July,2017

Permit No : NACOSTI/P/16/40744/12163
Date Of Issue : 20th July,2016
Fee Recieved :Ksh 1000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation