ADOPTION OF ELECTRONIC GOVERNMENT IN TANZANIA:
OPPORTUNITIES AND OBSTACLES
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By

Isabella Robert

A Thesis/Dissertation Submitted in Partial Fulfillment of the Requirements for
the Degree of Master of Public Administration (MPA) of Mzumbe University

2013
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2013
We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled **Adoption of Electronic Government in Tanzania: Opportunities and Obstacles** in partial fulfillment of the requirements for award of the degree of Master of Public Administration of Mzumbe University.

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DEDICATION

I dedicate this work to my precious little son Collins Kibeyo. He is my happiness, my confidence and my strength. He has motivated me to perform this work. I love you my son, and may God shower his blessings on you.
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<th>Description</th>
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<tbody>
<tr>
<td>COSTECH</td>
<td>Commission for Science and Technology</td>
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<tr>
<td>HURISS</td>
<td>Human Resource Information Support System</td>
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<tr>
<td>ICT</td>
<td>Information and Communication Technology</td>
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<td>IT</td>
<td>Information Technology</td>
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<td>KMC</td>
<td>Kinondoni Municipal Council</td>
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<td>LGA</td>
<td>Local Government Authority</td>
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<tr>
<td>MDA</td>
<td>Ministries, Department and Agencies</td>
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<td>MIS</td>
<td>Management Information System</td>
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<td>PC</td>
<td>Personal Computers</td>
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<td>PMO</td>
<td>Prime Minister’s Office</td>
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<td>PO-PSM</td>
<td>President’s Office-Public Service Management</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
</tr>
<tr>
<td>SSA</td>
<td>Sub Saharan Africa</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organisation</td>
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<td>UN</td>
<td>United Nations</td>
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<td>URT</td>
<td>United Republic of Tanzania</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>WWW</td>
<td>World Wide Web</td>
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ABSTRACT

The general objective of this study was to assess the opportunities and obstacles of the adaptation of E-Government in Tanzania, especially in the President’s Office Public Service Management. Specifically the study aimed at determining the challenges facing Tanzania in adoption of electronic government, exploring the roles played by electronic Government in delivery of services in Tanzania public organisation, and to examine the availability of resources needed for implementation of e-Government.

A combination of methods was used in data collection; this is a systematic collection of information concerning the problem under the study. In order to obtain primary data, interviews were conducted and these data supplemented secondary data as the basis for the theoretical and practical analysis of the problem.

E-government is important for the delivery of services since it provides citizens with a greater range of services and delivery channels, gives citizens greater access to the range of services delivered by departments by providing services in a way which suits citizens' and businesses' needs, providing faster and more accurate services and replacing manual processing of routine high volume work by IT systems.

The challenges facing adoption of e-government include of lack of computer infrastructure, IT knowledge, technical staff and poor networking. The study found deficiencies in other issues that are needed to facilitate the adoption of e-government. These include poor electricity supply, network failures and budget deficit.
CHAPTER ONE

1.0 Introduction

This chapter presents the background of the problem statement which include so far the meaning of Electronic Government, the successful implementation of E-Government in countries like America, Singapore and the challenges they faced in adoption of E-Government. The chapter also shows different challenges facing most of the Sub-Saharan African Countries in the adoption of ICT and opportunities they have in embracing Electronic Government so as to improve service delivery in their countries.

1.1 Background to the Problem Statement

Over the last two decades, computing power has spread to businesses and citizens in all developed countries. The availability of affordable networked hard- and software by the early 1990s made it possible for these computers to become connected to a global information infrastructure most commonly referred to as the “Internet.” As Netchaeva (2002) noted, electronic government would evolve swiftly through defined stages, beginning with a web presence of public agencies (“information”) to a means for citizens to communicate with these agencies (“interaction”) to offering public services online to citizens around the clock seven days a week in the convenience of their homes (“transaction”). This in turn would lead to a transformation of the public sector (Karim and Khalid, 2003). The sequence of stages will be fueled by technology, citizen demand, and economic realities in the public sector.

Electronic government so defined focuses on the interface between citizens and government, and on how it changes due to technology (Silcock 2001; West 2005). This flavour of electronic government promised to make it easier, faster, and cheaper for citizens (as customers) to transact with public agencies, responding to customer demand to “build services around citizens’ choices” (Curthoys and Crabtree, 2003).
In the United States, for example, the U.S. Post Office contracted a for-profit company to develop a one-stop shopping website for people moving from one location to another. The website moving.com offered citizens a way to file a change of address form, to notify utility companies of their move, and to buy packaging material and hire moving trucks from private-sector partners. *Moving.com* provided a customer-centric front office solution that reduced transaction costs for citizens by eliminating the need to go to the post office, file a change of address form, and notify separately utilities and others of the move.

Similarly, Singapore has integrated its online public services into an easily accessible web portal, through which citizens using a smart card can transact securely with their government, reducing citizen search and data entry costs (Lazer et al 2004; Yong 2005). Also, electronic government services offered in Dubai’s Internet City make it possible to incorporate companies or get a work permit in a matter of hours a drastic cost savings for the private sector compared with the paper-based process.

Successful implementation of electronic government may require significant engineering, marketing, and education efforts. Second, the online provision of public services requires governments to address equity questions between the digital haves and have-nots in a way that is not true of private actors (Warschauer, 2003).

Various countries face different issues and challenges as they design and implement efficient and effective e-government systems. In the case of US, for example, democratic values need to be incorporated into the design and implementation of e-government systems because it involves more than merely improving the instrumental processes of government (Brewer, et al., 2006). Thus, the authors argue that public administrators should take an active role in designing and implementing e-government systems to instill democratic values and ensure that democratic processes and outcomes are realised. The result will be communications infrastructure that can help government agencies respond effectively to chaotic events while still retaining their essential democratic nature.

- 2
The region of Sub-Saharan African (excluding South Africa) faces massive political and socio-economic challenges, in addition to the existing under developed human resources, deficient infrastructure, and cultural and funding constraints. The public sector also has its problems. It is based on manual filing systems, burdened by enormous movements of correspondence, duplication of files, wastage of paper, difficulty in accessing information in files, loss of data and general inefficiency of operations (Mutula, 2008). In the Information Communication Technology (ICT) context, the Sub-Saharan African countries have critical deficiencies (Maumbe et al., 2008). In terms of ICT adoption there is, lack of ICT policy and champions, weak political and budgetary commitments, resistance to change, and digital divide biased against a high rural population base. Nonetheless, many governments in Africa believe there to be enormous potential for e-government to help their countries improve the quality of life for citizens, increase government efficiency and help achieve sustainable socio-economic development (Maumbe et al., 2008).

Growing access to ICT has encouraged many governments to integrate new technology into their national economic development strategies (Tahrani, 2010). It is becoming an increasingly important public service tool for many governmental departments around the world (Nour et al., 2008), and the scale of activity on the part of public sectors in leveraging IT has increased in volume (Smith, 2008). The vast majority of public organisations around the world have established websites and provide public information to citizens (98% with website – 2% without websites) (UN, 2010). In addition, many transactions are now conducted online; these include, applying for jobs, completing tax returns and renewing drivers’ licenses (West, 2004).

However, financial transactions and opportunities for interactive political and policy participation are still limited (Holden, 2003). Countries and regions vary in their overall performance in e-government uptake (West,2008); for example, 40% of people using the Internet are in North America, 49% are in Japan and Western Europe, leaving only 11% from the rest of the world. The digital divide report (2006) shows that a person from a high-income, developed country is over 22 times more
likely to be an Internet user than someone from a low income developing country. This is significant as 37% of the world’s population live in low income countries. In the least developed nations the divide is even greater, with access 10 times less than that in developing countries (Brown and Thompson, 2011).

Yasin and Yavas (2007) stated that the level of diffusion and dissemination of e-government has been neither homogeneous, nor has e-government evolution influenced all cultural settings equally. The statistical results from many surveys conducted by international and national organisations (UN, 2008b; EIU, 2008; Bridges.org, 2008; Kirkman et al., 2002) show that the rich, developed and westernised countries are more likely to have advanced and mature e-government systems (Kim, 2007); while developing countries lag behind the rest of the world in terms of e-government adoption and dissemination. The EIU annual ranking report (EIU, 2009) classifies this geographically, with North America at the top of the list, followed by Europe, Asia, the Middle East, Africa, and the Caribbean & Latin America. Thus, the scenario narrated above prompted a study to understand the extent of challenges of e-government usage in developing countries, Tanzania being the case study.

**1.2 Statement of the Problem**

E-Government is more than just the adoption of Information Communication Technology (ICT) in the Government. It is about applying ICT to reform and improve government process and ultimately making the services more convenient and easily accessible. It is a key enabler for accelerating work processes, delivering services to citizens and businesses, increasing transparency and accountability, while also lowering costs of operation (Kitaw, 2006).

The Government of Tanzania has released its 2003 Information, Communication Technology (ICT) Policy (United Republic of Tanzania (URT, 2003) and the National E-government Strategy in 2009 (URT, 2009). This shows the effort put by the Government in implementing e-Government. Since 2003, much has been done to
achieve the vision outlined in that document and there is no doubt that Tanzania citizens could have “better services” and “a better government” through increased use of available technologies (URT, 2009). However these efforts are still debatable on whether they have achieved the intended targets.

Despite these efforts, the Government’s application of ICT to enable the better delivery of services and better government administration has been at times ad hoc and uncoordinated. There is a big problem in the public service as far as electronic government is concerned, there is a delay of pensions to the retired public servants, there are lots of complaints in the public service concerning promotions, for example to teachers, someone may be promoted to a certain post, but with no salary increments and can take some years until she/he gets the salary arrears, all these problems are caused by lack of networking between government offices, there are so many public servants vital records which are being mishandled and misplaced, letters of employment, promotions and other personal particulars of a public servant are supposed to be electronically kept so that when he/she retires, get promoted or unfortunately passed away, there is a way to trace all the working documents and personal particulars, and this will help to get their rights they deserve. Government is still working manually on paper based, which is not bad, but the efforts should be on reducing too much papers which increases bureaucracy in the delivery of services to the citizen and put efforts on networking the government offices electronically to reduce delays in services delivery and reduce complaints from the public servants and the citizen. It is the aim of this study to examine the opportunities and obstacles of the adaptations of Electronic Government in Tanzania particularly in Presidents Office, Public Service Management

1.3 Objectives of the Study

The general objective of this study is to examine the obstacles and opportunities for adoption of electronic government in the President’s Office-Public Service Management with specific objectives as follows;

1. To explore the roles played by electronic government in delivery of services.
2. To identify the challenges facing the Ministry in the adoption of electronic government.

3. To examine the availability of resources needed for implementation of e-Government.

1.4 Research questions

The general question is to evaluate what are obstacles and opportunities for adoption of electronic government at President’s Office-Public Service Management. The following are the specific questions;

1. What are the roles played by electronic Government in delivery of services in the Ministry?

2. What are the challenges facing the Ministry in Adoption of Electronic government?

3. What resources are available for implementation of e-Government?

1.5 Significance of the Study

- This research investigates the adoption of e-government in Tanzania. It is an important subject for researchers, professionals, politicians and decision makers in developing countries, which are characterised by low levels of diffusion and adoption. The findings and conclusions of this study will be useful for policy makers at both the national and organisational level; to guide them towards taking correct decisions, enhance their working environment and prepare the public sector for the process of change. Further the significance of this research can be seen through the following: In previous e-government studies, much of conducted research, surveys, assessments and even training programmes focused on technical factors
(Esteves and Joseph, 2008). This research takes a holistic view by addressing the contextual issues, both technical and non-technical, that contribute to e-government adoption.

- Many governments in developing countries are embracing digital knowledge. However, there is relatively little research related to e-government in either region. Therefore there needs to be significantly more examination, testing and modification of information technology to suit the context of these countries.

- This research highlights the importance of e-government adoption in Tanzania as a significant issue for academics and professionals. E-government is at an early stage in Tanzania and there has been very little research examining this topic. The importance of this research is to help to identify the challenges facing, and opportunities for assisting the adoption process. Further, the analysis and findings from this research are expected to provide valuable information and guidelines for use in decision making regarding the adoption of e-government in Tanzania.

1.6 Limitations of the Study

The researcher was faced with the following impediments during preparation of this research study;

i. Access to personnel

Sometimes it was difficult to acquire accurate information concerning the application of e-government from some respondents involved. Some information were termed as confidential or rather some respondents were deliberately unable to cooperate.
ii. Access to resources

The researcher was faced with the issue of inadequate funds sometimes impeded the researcher. Further, due to limited time the researcher experienced difficulty to collect data.

1.7 Organisation of the Dissertation

This dissertation is organised into five chapters. Chapter One introduces the research topic. It gives the background to the problem, statement of the problem, objectives of the study, the research questions, significance of the study and the study limitations.

Chapter Two provides for the literature review. It probes into the concepts of e-government, overview of the e-government adoption, forces behind information technology, challenges in promoting e-government, advantages of e-government and the state of e-government in the world and Tanzania as well.

Chapter Three provides for the research methodology. It contains the research design, study population, data collection method techniques, data analysis and ethical consideration.

Chapter Four gives presentation and discussion of the study. It provide the profile of the study area, functional roles, rationale of choosing the area, categories of respondents, position of respondents on the matter, use of e-government, service delivery, challenges facing implementation of e-government and strategies to improve e-government.

Chapter Five wind up the dissertation. It provides a summary, conclusion and recommendations accordingly.
CHAPTER TWO

LITERATURE REVIEW

2.1 The e-Government Concept

Due to differences in ideological lens and/or perception of individuals, e-government means different things to different people. According to Barr (2001), e-government is “the use of internet technology and protocols to transform agency effectiveness, efficiency, and service quality”. Put it differently, Gartner Group (2000) describes e-government as “the continuous optimization of service delivery, constituency participation and government by transforming internal and external relationships through technology, the Internet and new media” (Fraga, 2002). While Detlor and Finn (2002) have defined electronic government as “the delivery and administration of government products and services over an information technology infrastructure”. Gronlund (2002) stated that “e-Government generally refers to more use of IT, but more importantly to attempt to achieve more strategic use of IT in public sector”. In a more comprehensive way, Kieley, et al. (2002) defined electronic government as “an IT-led reconfiguration of public sector government-and how knowledge, power and purpose are redistributed in light of new technological realities”. In this research work, electronic government is defined as the use of Information and Communications Technology (ICT) to promote more efficient and cost-effective government, facilitate more convenient government services, allow greater public access to information and make government more accountable to its citizens.

2.2 Conceptualization of Key Terms

2.2.1 e-Government

E-government is defined as the use of ICTs such as the Internet and the web as a tool to achieve better government by enabling better policy outcomes, higher quality services, and greater engagement with citizens (OECD, 2004). This definition is not far from those of not only international institutions (2002), but also academic scholars (Peristeras et al., 2002). Simply, e-government means utilizing a variety of
the Internet-based IT to achieve administrative objectives. The Internet is crucial, enabling one-to-many interaction between the government and people.

Originally, informatisation was the container concept in which the combination of processes, started by computerization or the deployment of ICTs, was lumped together (Snellen, 2005). E-government is considered as carrying out governmental activities by using the Internet. The information society policy, dealing with the information society problem which is symmetrical to the industrial society, can be seen as the concept that includes all of such evolutionary scopes. The concept of E-government has been continuously evolving toward a new direction, according to the adoption of new IT or the degree of governmental innovation.

2.2.2 Interoperability

Organisations’ ability to share information systems and/or data, generally based on using common standards. Technically it means hardware devices, communication devices or software components can easily communicate and work together. However, there are other dimensions of interoperability. These include business and government interoperability of processes, where the business processes or administrative services can connect and integrate with each other through communications processes. From an e-government perspective Pardo (2011) argues that interoperability: “…represents a set of multidimensional, complementary, and dynamic capabilities needed among organisations in order to achieve successful information sharing”. Hence, e-government requires both technical and organisational interoperability in order to allow information sharing and integration within and across public organisations.

Before the advent of the Internet it was it was hard for organisations to communicate and exchange information. New web-technology created a platform for integration and sharing of information, making the issue of interoperability less problematic. However, high levels of compatibility are far way from being achieved (AL-Shehry, 2008), especially in developing countries. In Jordan the lack of interoperability and
standardization led individual ministries and governmental departments to use many different architectures and systems that are not particularly interoperable

2.2.3 Information and Communication Technology (ICT)

Any equipment or interconnected system (or subsystem) of equipment that includes all forms of technology used to create, store, manipulate, manage, move, display, switch, interchange, transmit or receive information in its various forms. Such forms can include: business data; voice conversations; still images; motion pictures; multimedia presentations and others not yet conceived. Communication refers to a system of shared symbols and meanings that binds people together into a group, a community, or a culture. The word communication was added to ICT to make a network of the usage of Information Technology. ICT refers to both computer and communication technology.

2.2.4 Information Technology

The hardware, software and methods used for electronic processing and transfer of data.

2.3 An overview of E-Government Development

The former U.S. Presidential candidate (Al Gore) raised the issue of e-government, with a vision of linking citizens to the various agencies of government in order to receive services electronically (Almarabeh and AbuAli, 2010). The idea has attracted interest from other politicians, policy makers, and individuals in countries that can be either: developed or developing; capitalist or communist; democratic or authoritarian (Grant and Chau, 2005; Stoltzfus, 2005). Unlike other concepts (such as, globalisation and privatisation) which are still considered controversial (Stoltzfus, 2005; Kraemer et al., 2002), e-government is perceived as a good thing and it is rapidly developing and spreading across all levels of government (Gulati and Yates, 2011). Indeed, governments are making massive financial and political commitments in order to establish e-government systems (Stoltzfus, 2005). However, the goal and
objectives of these systems vary from: a developed to a developing country; public to private sector; as well as from citizen to business or organisation.

E-government primarily refers to the use of Information Technology in governmental organisation processes, even though the use of IT tools in the public sector is not a new practice. Some countries have been using IT in their governmental processes and procedures since the 1950s (Heeks, 2002). The difference is that IT was used to automate the internal work of government by processing data, whereas now, the use of ICT is transforming the external work of government by processing and communicating data (Heeks, 2002). E-government is therefore to be seen as an evolutionary rather than a revolutionary phenomenon (Gupta and Jana, 2003). Recently there has been pressure and demand from citizens to provide services online, due to growing technological maturity lowering the risk of adopting new technologies (Accenture, 2004).

There is also international pressure to participate in the e-economy and be part of the global economic network (Ndou, 2004; Ifinedo, 2005). This pressure forced policy and decision makers, including those in poor and less developed countries, to facilitate the transformation to e-government systems. Unfortunately, the transformation has often been associated with complexity and difficulty (Ifinedo, 2005) due to the multiple dimensions and perspectives involved (Alshawi and Alalwany, 2009; Veenstra et al., 2011). E-government is surrounded by political, economic, cultural, technological and organisational factors; and these factors greatly influence the various sectors and stages of e-government progress (Ndou, 2004; Edington and Shin, 2006; AL-Shehry et al., 2006; Al-Adawi et al., 2005). The socio-technical nature of e-government suggests that these issues will need to be addressed with careful attention to context (Seifert, 2003), as the contextual nature of a country can lead to e-government difficulties. The complexity of e-government as a socio-technical system (Lau et al., 2008) challenges the transformation in many developing countries (Seifert, 2003). Therefore, for effective e-government it is important to successfully introduce technology into the specific context (Heeks, 2003; Gupta and Jana, 2003).
On one hand, e-government offers great opportunities for governments to enhance efficiency and increase productivity, but it also raises new challenges; including the reengineering of processes and funding and management responsibilities. The potential of e-government can be seen as a: “paradigm shift that improves how government operates and how society views, understands and interacts with government” (Parisopoulos et al., 2007).

E-Government developments are influenced by so called e-government development models. These models are specifically designed to guide the implementation and development of e-government applications in a stage-wise manner from immature (one-way communication) to the mature (digital democracy) stage. The advantage of having a stage-wise approach is to offer governments abilities to measure the progress and also to generate momentum that could subsequently be maintained. The eleven (11) e-government maturity models, namely: Asia Pacific, Chandler and Emmanuel, Deloitte and Touche, Gartner, Hiller and Blanger, Moon, Howard, Layne and Lee, UN and DPEPA, Darral West, and World Bank are as follows.

2.3.1 Layne and Lee’s Four Stage Model

Layne and Lee (2001) regard e-government as an evolutionary phenomenon based on the authors’ observation and experience in the area. They propose four stages of e-government development. Basically, the model is based on technical, organisational, and managerial dimensions. The full descriptions of the models’ four stages are:

**Cataloging** – this stage is meant for delivery of some basic information through website. In most cases the websites are considered to be static; it enables citizens as users to access on-line presentation and downloadable forms;

**Transactional** - is a stage that propagates the former, whereby it enables citizens to do on-line transactions (two-ways communication);

**Vertical integration** – this stage focuses on the automation of more government workflows and also transformation of government services; it includes integrating
government functions at different levels such as these of local and states governments; and finally

*Horizontal integration* – this focuses on systems integration between different levels and functions for providing users with a unified and seamless service.

This model so far, links with this study because, Tanzania is still in a very initial stage of adopting E-Government, some of the ministries have started with the websites for instance the Presidents-Office, Public Service Management which is www.estabs.go.tz, where by the citizens can do online transactions. Electronic Government is an evolutionary phenomenon so the process of integrating government functions at different levels, from the central to the local government is still on the move, the aim of all these is to let the citizen to know what their Government is doing and to improve service delivery to both the public servants and the citizen as a whole.

### 2.3.2 Chandler and Emanuel’s Four Stage Model

Chandler and Emanuel (2002) developed a four stage model. The narrations of the stages are: *Information* – this is a preliminary stage, were most of government services delivery is available online. Citizen can access government information over a website (static) – this is a one-way communication between government and citizen.

*Interaction* – this is the advanced stage of the former; simple interaction between citizens and governments are enhanced; various website features and functionality are available including search, and emails; at this stage the communication is two ways.

*Transaction* – refers to services that enable transactions of values between citizen and government; citizen can pay taxes, submit forms on-line.
Integration – this is the final stage where vertical and horizontal integration of services across government and agencies occurs. Citizen can access information online from one service centre.

2.3.3 United Nation’s Five Stage Model

United Nations (2001) proposed a five stage model with a focus on web based public service delivery. Description of the model stages are:

Emerging web presence – this is the initial stage where government websites provides mostly basic and limited static information with less options for citizens.

Enhanced web presence – this is the second stage where there are improvement of government websites in terms of providing dynamic, specialized and regularly updated information. Among the website features include search facilities, online help, and site maps.

Interactive web presence – users and service providers are connected to government portals (websites); Interaction became more sophisticated than in the former stage. Services such as search facilities and accessibility of various forms are enhanced.

Others are Transactional web presence – this stage allows two-way interactions between the citizen and the government; users can conduct complete online transaction including buying and selling activities.

Seamless/Networked web presence – this is the most sophisticated level of e-government service delivery; all services and functions across all government levels are integrated; citizens can access any kind of services from a central location at any given time.

2.3.4 Word Bank’s Three Stage Model

Word Bank (2003) proposed a three stage model. These are:
**Publishing** – this is the first stage, government disseminates information to citizen through website; all important information is posted on the website.

**Interactivity** – at this phase government interacts with citizen. Websites are enhanced with interactive capabilities such as feedback forms and email. And lastly is

**Completing transaction** – this is the final stage of e-government development; citizen/users can use the opportunity of the available technically enhanced website to conduct complete and secure transactions on-line.

2.4 Driving Force of Information-Society to E-government

The major drivers of e-government have been sketched as technological, organisational and environmental (Abdul, 2010). However, technology should not be emphasised at the detriment of other factors such as politics, legal frameworks and the environment. Technological determinism does not fully explain the evolution of e-government. While technological progress in government is important, ITC infrastructure and available ICT expertise may influence the implementation of e-government. Further, the support and active commitment of influential politicians may play a significant role in promoting e-government “buy in”. According to Wilson, (2004) if politics is wrong then the other major drivers of e-government will not work. Leadership should be committed to “press changes in the face of institutional rigidity, technological backwardness, and political resistance”.

E-government can be implemented successfully if it is regulated by a legal framework. Legal issues revolve around cyber-security, digital signatures and personal data protection and confidentiality. Digital signatures should be recognised by the law so that they have the same integrity as paper-based ones. Laws limiting the government’s power vis-à-vis the individual in terms of the control of personal information should be passed.

Almost unknown a decade and half ago, e-government is a prominent concept today in both popular and academic discussions on government reforms. At the same time, initial expectations about e-government’s transformative potential have undergone a
critical evaluation. Studies have repeatedly shown that the diffusion of e-government has been slower than expected and the governments are not making full use of the available technology for reforming government. Wherever adopted, the impact of e-government has been only incremental rather than transformative (West, 2004).

2.5 Benefits of e-Government

There are a wide range of choices and opportunities available for developed as well as developing countries by enabling ICT tools. ICT can play a profound role as part of an overall national strategy for development. The utilization of ICT in many developed countries is facilitating the transition from industrial based economies to knowledge based societies. For instance, the European Commission consider: “a modernized ICT enabled government is crucial to promote the growth and competitiveness of the European knowledge society” (Wimmer et al., 2007).

E-government is one, if not the most significant application in ICT. It has the potential to improve the capacities of government institutions and to offer opportunities to better resolve problems facing the public administration in most developing countries (Schuppan, 2009). In Africa this may include management, information processes, statistics, time and/or cost of services and public participation (Schuppan, 2009). In the Arab world, the digital economy improved the Gross Domestic Product (GDP), budget surplus and trade surplus via e-business and e-government (Azzam, 2002).

As Holmes (2001) points out, the purpose of e-government is to realize the delivery of public services in a much more convenient, customer-oriented and cost-effective way. Assessment measurements show: “the close relation between e-government and other development agendas, for example education, investment policies, or telecom (de)regulation” (Gronlund et al., 2006). In fact without such alignment with developing programs the e-government will be meaningless and will likely fail (Gronlund et al., 2006). This will help to improve the quality of life of citizens and can contribute significantly to the governments’ efficiency and effectiveness.
Moreover, IT is expected to create unprecedented possibilities for sustainable economic development (Avgerou, 1998) and increase transparency, accountability and democracy. This can be achieved by allowing access to information and providing decision-making participation (Figure 2.1).
2.6 Challenges of Promoting E-Government

A number of challenges have limited the reach and impact of e-government. Several social, economic and political barriers constrain the scope of transformation and restrict the ability of policy makers to make effective use of new technology (Collodi, 2013). The two most commonly cited constraints are digital divide and the political nature of public sector reforms. Universal access to the internet is still far away in many countries. In some countries significant proportion of population cannot afford to access the technology even when it is available (ibid).

There are many challenges in promoting e-government, not just in Tanzania, but in all other countries, especially the developing nations. Some of these challenges can be described as internal, or inherent to the government systems, while others are
external or influenced by outside factors. These include infrastructure development, law and public policy, digital divide, e-literacy, accessibility, trust, privacy, security, transparency, the ability of diverse systems and organisations to work together, records management, permanent availability and preservation, education and marketing, public sector and private sector partnerships, workforce issues, cost structures and benchmarking.

2.6.1 Education

For successful e-government, people as individual citizens or in their groupings, need to be able to interact with the government. For this they need the right “ammunition.” They need the proper skills particularly in ICT, civic education, business skills, legal awareness, etc. How can they interact with the government without knowing in what areas they are going to interact? This is a big challenge for Africa, because most of them are still lagging behind in ICT usage and civic education is still struggling on its feet. There’s room for improvement, through infrastructural development (power, etc.). Without proper infrastructure, e-government will continue to be a dream for many developing nation. For e-government to develop, serious investment in ICT infrastructure is needed.

2.6.2 Information Literacy and e-literacy

Information literacy is fundamental to the use of information resources in the knowledge age. Information literacy refers to the person’s ability to “recognise when information is needed and have the ability to locate, evaluate and use effectively the needed information” (Lau, 2006). Literacy today also means ICT literacy and skills. ICT literacy among the citizens has significant role to play in implementing e-government as it is fundamental to the ability of citizens to access and use electronic information.
2.6.3 Accessibility to ICT Equipment

Africa does not manufacture most of the ICT equipment; they are imported. Even though the government has waived import duties on ICT equipment, there is still a long way to go and these equipments are very costly. Most of the Africans do not have the ability to buy them, and do not even have access to them.

2.6.4 High Cost of Investment

Even if people have the ability to buy the micro-level ICT equipment such as computers, mobile phones, etc. the cost of providing ICT services is still very high and Governments needs to intervene. A good example is the laying down of the international fibre optic communications cable connecting different nations in the world. It is a very important, yet very expensive project. But once it is completed, countries will be at another ICT level. This is a big chance for us Tanzanians to promote e-government.

2.6.5 Rapid Technological Change

Technological advancements and the search by suppliers for new markets have resulted in a bewildering array of technical solutions in search of problems to fix. Governments face the challenge of fostering the development of e-government while there is still great uncertainty regarding fast moving technological change, and it is difficult to anticipate future policy impacts in detail. New technologies are tempting because they often promise better solutions and enticing possibilities for business change. More often, however, they promise solutions that purport to enable an organisation to implement IT without changing its business processes. It is therefore not surprising that public sector organisations keep trying to develop systems based on new technologies. Experience shows, however, that systems built on emerging and unknown technologies are very susceptible to failure. In some instances the potential benefits might warrant taking such huge risks; most often this is not the case.
2.6.6 The Digital Divide

The disparities related to accessing ICT have been characterised as the “digital divide.” The level of e-government readiness in a country is partly measured by access to ICT. The United Nations E-government Readiness Index of 2003 showed that South Africa was the only country in Sub Saharan Africa that was among the top 100 countries in relation to e-readiness. The index of United States, the leading country in the world, was 0.927 and South Africa was pegged at 0.515. The fifth country in Sub Saharan Africa was Namibia with a ranking of 0.34. South Africa remained among the top 100 countries in the Economist Intelligence Unit’s e-readiness ranking of 2006 and it was joined by Nigeria.

There is a big gap between the developed nations and a developing nation like Tanzania. Other countries are far ahead in terms of ICT development and e-government. Developing countries needs to learn from developed ones and allow the technological assimilation process to take effect. Otherwise they will be left very far behind.

2.6.7 Access to Information and Telecommunication Technologies

ICT provide information and services to the people cheaply, efficiently and effectively. The use of ICT can “systematise the transparency of government” by “providing relevant and timely information in large quantities.” Although the implementation of e-government programmes involves the use of many ICT applications, it is the Internet that is the most widely recognized and identifiable component driving e-government. The lack of telecommunication infrastructure in Africa has seriously restricted the use of the Internet and the adoption of e-government in SSA. Furthermore, Internet connection charges are beyond the reach of the average citizens in many countries in SSA. One in 40 people have a fixed line, one in 130 has a Personal Computer and one in 160 uses the Internet in SSA.

Most of the existing telecommunications infrastructure does not reach the bulk of the population. In fact, Tokyo “has more telephone lines than sub-Saharan Africa put together” (Mbeki, 2000). Fifty per cent of the available lines are concentrated in the
cities, where only about 10 per cent of the population lives (ibid). ICT foundation is weak and there is no universal access to the Internet. Irregular or non-existent electricity supplies are a major barrier to use of the ICT, especially outside the major towns. Power outages are also experienced. For instance, a cyber café had to close shop in Kenya as result of unreliable power supply (Kathuri & Nyasato, 2007).

2.6.8 Bandwidth

The World Bank Report on “African Region Communications Infrastructure Programme” of 2007 pointed out that the East and Southern African regions suffer bandwidth deficiency as it accounts for less than one per cent of the world’s international bandwidth capacity. Limited connectivity and costly access hinders the potential of African countries to utilize ICT to promote social participation and improve government efficiency and transparency.

Inequitable access to ICT such as personal computers, Internet, telephones, cable and other Internet-related technologies by individuals or groups of people in their countries in order for the citizens to benefit from the government processes driven by ICT is another challenge facing governments.

2.6.9 Information Management

Government’s provision of access to information is the foundation of a democratic society. Information partly facilitates decision making, citizen oversight of government departments and their decisions, and citizen debate on policy issues and policy formulation. Information management in general and records management in particular, is a cornerstone to government information systems and effective access to information.

The advent of ICT has brought about a paradigm shift in the production of government information. Government processes are mainly generating electronic
records as evidence of government’s conduct of business. This is all happening at
time when many records managers do not have the necessary professional
capability to deal with electronic records. Weak institutional capacity and the
absence of comprehensive records management policies, guidelines and practical
standards have aggravated the situation.

2.6.10 Resistance to change

As e-government requires fundamental change, resistance from some employees is to
be expected. Wargin and Dobiey (2001) address many of the reasons behind
resistance to change, such as: lack of skills required for using the new technology,
lack of understanding the ‘big picture’, changes in the organisational structures and
redistribution of power. Luke (1982) also sought to explain resistance to change.
People are seen to resist anything that can cause work disruption or interrupts their
routine. There is also a reluctance to take time and learn something new, especially if
there is alack in understanding the capabilities and use of new equipment. Dent and
Goldberg (1999) argue that individuals are not really resisting the change itself, but
rather they may be resisting the loss of status, loss of pay, or loss of comfort. Ho &
Ni (2004) assert that organisations employing people with sufficient intellectual
capacity to understand the vision for an innovation, and are willing to take the time
and effort to persuade and motivate others to support the idea, are more likely to
become an innovative organisation (Altshuler and Zegans, 1990).

2.7 Advantage of e-government

2.7.1 Increase Accountability

E-government has the potential to alter the traditional relationship between
government and citizens by creating a new virtual government-and-citizen interface.
With the popularity of e-government and the increasing interaction between
government and citizens through the internet, a major question comes: To what
extent does e-government promote public accountability? Although accountability
can be an elusive word in public administration, it often refers to the answerability of government to the public on its performance (Wong and Welch, 2004).

E-government is often viewed and promoted as a positive channel for enhancing government accountability and empowering citizens (La Porte, de Jong et al., 2000). More information delivered in a more timely fashion to citizens is expected to increase transparency of government, empowering citizens to more closely monitor government performance. Enhanced interactivity of the technology is also expected to improve government accountability as it makes government more responsive to the needs and demands of individual citizens.

However, there are arguments against this positive vision of e-government accountability. Information technology in public organisations often simply improves their technical efficiency without leading to significant organisational changes (Heintze and Bretschneider, 2000). Instead of changing the nature of organisations, the role played by information technology is often no more than reinforcing “existing tendencies” of organisations (Kraemer and Dedrick, 1997).

2.7.2 Opportunities

The fourth African Development Forum (held in Addis in October 2004) produced a Consensus Statement declaring that E-Government is an important innovation for enhancing good governance and strengthening the democratic process. It further acknowledged that E-Government can facilitate access to information, freedom of expression, greater equity, efficiency, productivity growth and social inclusion (Kitaw, 2006).

Quality of public services in Africa is generally poor. Dzidonu (2006) when describing government services in Ethiopia noted that they are “characterized by cumbersome procedures, long delays in service delivery to clients, and consequently high costs to citizens, discourteous behavior of civil servants to citizens, a demand for compliance by citizens with the bureaucracy’s archaic methods of doing things with a take it or leave it attitude.” Introduction of ICT-based services creates an
opportunity to identify flawed processes and re-engineer them, consequently improve not only the efficiency but also the quality of service to citizens.

Successful E-Government initiatives offer tangible opportunities which include: transformation of cumbersome public administration and service delivery processes thereby increasing efficiency of governments, empowerment and participation of citizens, thereby contributing to strengthening democratic processes, greater transparency and accountability. This leads to better governance, and reduce opportunities for corruption, stimulate the usage of ICT applications in other development sectors (E-Health, E-Education etc.), thereby opening opportunities to transform agriculture based economies.

2.8 Application of ICT in Sub Saharan Africa

The continent of Africa constitutes two distinct regions: North Africa and Sub-Saharan Africa (SSA). All countries in the North are part of the Arab World, with different cultural and economic characteristics from the rest of Africa (Ifinedo, 2005). The region of SSA (excluding South Africa) faces massive political and socio-economic challenges, in addition to the existing underdeveloped human resources, deficient infrastructure, and cultural and funding constraints. The public sector also has its problems. It is based on manual filing systems, burdened by enormous movements of correspondence, duplication of files, wastage of paper, difficulty in accessing information in files, loss of data and general inefficiency of operations (Mutula, 2008). In the ICT context, the SSA countries have critical deficiencies (Maumbe et al., 2008). In terms of ICT adoption there is:

a. Lack of ICT policy and champions
b. Weak political and budgetary commitment
c. Resistance to change
d. Digital divide biased against a high rural population base

Nonetheless, many governments in Africa believe there to be enormous potential for e-government to help their countries improve the quality of life for citizens, increase
government efficiency and help achieve sustainable socio-economic development (Maumbe et al., 2008).

There are two main issues that frame the discussion in this section; firstly, the policy and direction of e-government in Africa; and secondly, the e-readiness of e-government in the region. Africa is starting to embrace the concept of digital, knowledge-based economies in preparation for being part of the global economic value chain (Bwalya and Healy, 2010). Although this paradigm has encouraged the escalation and adoption of ICT applications, such as e-learning and e-government (Bwalya and Healy, 2010), poor conditions on the continent are constraining the efficient use of these applications. Hence the WSIS, under the Tunis agenda (WSIS, 2005), specified that ICT plans need to be an integral part of national development strategies. Many emphasised that developing countries should work for the interaction of financial, technical, managerial and social factors in delivering government transformation through e-government (Ndou, 2004; Grant and Chau, 2005; Brown and Thompson, 2011). Others suggest a context-oriented approach as a more promising route for e-government adoption (Heeks, 2002; Dada, 2006; Schuppan, 2009). Countries including South Africa, Mauritius, Senegal and Mozambique have already shown serious commitment, by putting in place the institutional and regulatory policy frameworks for e-government development (Maumbe et al., 2008; Bwalya and Healy, 2010). A number of policies addressed the liberalization of the telecommunications sector and the ICT-based economic growth. Coleman (Coleman, 2003) suggests that an effective strategy for African e-governance should avoid three key pitfalls:

1) The adoption of technologies without developing human skills and capacities to manage, integrate and sustain them.

2) The centralised use of technologies by national government departments, without disseminating the benefit of the technology to intermediary institutions; such as national parliaments, local governments, political parties, civil society organisations and independent media.
3) A failure to link better governance to broader and more inclusive democracy, which gives a voice to those who cannot afford technologies, but have needs and ideas to express.

In e-readiness ranking surveys conducted by international organisations (UN, 2010; Bridges.org, 2008; EIU, 2009) Africa lags behind the rest of the world in terms of technology, human capacity and e-participation. In terms of internet usage and penetration rate, no country from Africa appears among the top thirty six (Internet World Statistics, 2009). The African continent was estimated in 2007 to be home to 14.2% of the world’s population, but had only 3.6% internet penetration and 2.9% of internet usage. In comparison Europe had 12.3% of world population, 11.8% penetration and 37.2% Internet usage (Internet World Statistics, 2009). However, there has been some improvement in the region according to the latest UN e-readiness’ report (UN, 2010)

2.8.1 Accessibility

Ngulube (2007) investigates the nature and accessibility of E-Government in Sub Saharan Africa. He reveals that e-government is a phenomenon that is linked to the information to the society and the advantages associated with it. E-government allows government departments to network and integrate their services using information and communication technologies in order to improve service delivery and enhance the relationship between the government and the public. The major ingredients of e-government are infrastructure, human resources and information. The reality in Sub Saharan Africa (SSA) is that all these ingredients are insufficient. The ICT infrastructure is not widely available to rural populations. In most cases, both government officials and the people who may want to use government services online lack basic skills. Government information is not properly organized as records management systems in many countries are collapsing.
2.8.2 The State of Government Websites

Many government websites are not fully functional and they are populated with information that does not enhance service delivery and participatory democracy. A fully functional e-government website should have an e-participation framework which provides e-information on policies and programmes, budgets, laws and regulations, e-consultation mechanisms and tools, and e-decision making. Governments with an e-participation framework are participatory and inclusive. In many instances citizens are still obliged to visit government offices even if they may download certain documents from government portals as they may not be processed online.

2.8.3 E-Government Application

Application of e-government in public sector provides opportunity and benefit to improve quality and accessibility of services to the citizens. In addition to efficiency enhancement, the quality of services may improve via quicker transactions, accountability and fast/better process in services delivery. The evolution of e-government can also create potential for new services. The application of e-government is to increase citizen participations in government activities, where citizens in remote areas can be easily connected through establishment of ‘one-stop’ flagship center to send and receive information more instantly from the government agencies and institutional bodies. Hence, application of e-government in public sector allows is to provide opportunities for people with similar interests, opinions and concerns that may be geographically separated, to interact and share information affecting their daily lives and the country at large.

2.8.4 Reforms

Generally, it is highly believed that no managerial reform can be materialized unless it is supported by ICT to improve effectiveness and efficiency of personnel management, procurements and many other government activities. Kaboolian (1988) argued that “the opportunities presented by e government for improved administration, among other things, are leading to a global convergence toward a
standard reform model” in public sector. In the same line of argument for, Landsbergen and Wolken (2001) have also pointed out that ICT-enabled reforms can yield many benefits, including lower administrative costs, faster and more accurate response to requests and queries of the citizen, especially after the normal office hours. It will also lead to direct access to transaction or customer accounts held in different parts of government institutions. More so, e-government provides basis for ability to harvest data from operational systems, thus increasing the quality of feedback to manager and policymakers. However, the benefit can only be materialized if difference offices and people are willing to share information with common mutual interests.

According to Michiel (2005), Tanzanian e-government is in its infancy. The central government website (www.tanzania.go.tz) was inaugurated in way back in 2000 and since then some government branches and local government authorities have focused on e-government initiatives. An elaborative e-government strategy has since been approved by Cabinet for implementation.

2.9 The E-Government in Tanzania

The e-government project was the brain child of the Tanzanian Commission of Science and Technology (COSTECH) which was intended as a follow-up to the recommendation of the 1998 National ICT round table on Governance facilitated by International Institute for Communication and Development (IICD). The project proposal followed a feasibility study of August 1998 conducted to investigate, identify and recommend possible areas for sustainable computerization in the local governments. The feasibility study identified data flow patterns and their reporting mechanisms within and across various government sectors.

The COSTECH feasibility study revealed that most of tasks e.g. at Kinondoni Municipal Council (KMC) were manually processed and were largely ineffective and inefficient (Menda, 2010). The tasks include elections supervision, basic infrastructure (roads, water supply, etc.) construction and maintenance, waste management, and the maintenance of security, law and order. Transparency was
limited by a slow flow of information which impeded direct access to KMC public services. Moreover, due to lack of a computerised Management Information System (MIS), the KMC resources were poorly managed, which translated into poor public services. The KMC project thus established a pilot MIS for the top administration.

Databases for various services and records, such as health, education, birth, marriage and death, are computerised to facilitate good governance and to accelerate public services and the compilation of various social services reports. The process of registering and issuing birth, marriage and death certificates is now ten times faster than before the project inauguration. The project has also enhanced the management and processing of matters pertaining to foreign trade and investment in Kinondoni district (Menda, 2005).

Since the world is changing fasts, it is a questionable issue to why Tanzanian public organisations are still in infancy stage of e-Government. Due to this it is the aim of this study to investigate the opportunities and obstacles for e-government adaptation in Tanzania especially Ministry of Public services.

2.9.1 Challenges of Promoting E Government in Tanzania

There are many challenges in promoting e-government, not just in Tanzania, but in all other countries, especially the developing nations. Some of these challenges can be described as Internal, or inherent to the government systems, while others are external or influenced by outside factors.

*Education (Civic, Business, Legal, IT)*

For successful e-government, people as individual citizens or in their groupings, need to be able to interact with the government. For his they need the right “ammunition”. They need the proper skills particularly in ICT, Civic education, Business skills, Legal awareness, etc. How can they interact with the government without knowing in what areas they are going to interact? This is a big challenge for Tanzanians, because most of them are still lagging behind in ICT usage and civic education is still struggling on its feet. There is room for improvement, though.
**Infrastructural development**

Our nation is facing serious infrastructural challenges, particularly in the ICT sector. Without proper infrastructure, e-government will continue to be a dream for our nation. We need serious investment in ICT infrastructure for government to develop.

**Accessibility to ICT equipment**

Tanzania does not manufacture most of the ICT equipment, we import them. Even though the government has waived import duties on ICT equipment, the country still have a long way to go and these equipment are very costly. Most of the Tanzanians do not have the ability to buy them, and do not even have access to them. The country need to fix this situation if we want to have proper e-government.

**High Cost of Investment**

Even if we had the ability to buy the micro-level ICT equipment such as computers, mobile phones, etc. the cost of providing ICT services is still very high and Governments needs to intervene. A good example is the laying down of the international fibre optic communications cable connecting different nations in the world. It is a very important, yet very expensive project. But once it is completed, the country will be at another ICT level. This is a big chance for Tanzanians to promote e-government.

**Rapid technological change**

Technological advancements and the search by suppliers for new markets have resulted in a bewildering array of technical solutions in search of problems to fix. Governments face the challenge of fostering the development of e-government while there is still great uncertainty regarding fast moving technological change, and it is difficult to anticipate future policy impacts in detail. New technologies are tempting because they often promise better solutions and enticing possibilities for business change. More often, however, they promise solutions that purport to enable an
organisation to implement IT without changing its business processes. It is therefore not surprising that public sector organisations keep trying to develop systems based on new technologies. Experience shows, however, that systems built on emerging and unknown technologies are very susceptible to failure. In some instances the potential benefits might warrant taking such huge risks; most often this is not the case.

**The digital divide**

There’s a big gap between the developed nations and a developing nation like Tanzania. Other countries are far ahead in terms of ICT development and e-government. The country need to learn from them and allow the technological assimilation process to take effect. Otherwise e will be left very far behind.

**2.9.2 Future Prospects of e-Government in Tanzania**

Public service delivery and at how e-government is changing, or has the potential to change, the democratic landscape. Tanzania is still lagging behind in promoting e-government and more efforts need to be put by all the actors. The weaknesses in the current e-government settings pose a great challenge to us as Tanzanians, especially in the modern times where he people are more exposed and want a piece of the action. People monitor what is going on within the government and in other countries as well. But this will definitely change in the future. With more efforts in improving the peoples’ ability to interact electronically with the government, and meaningful investment in education and ICT infrastructure. The fact that more and more people are using mobile phones is a good sign that people are starting to feel the importance of ICT and waking up to the call.

**2.10 The Conceptual Framework**

Heeks & Bailur (2007), stated that: “there have been few, if any, analytical studies of e-government success and failure in Africa. In seeking models, we therefore turn initially to the broader literature on success and failure of ICT projects in developed countries”. The problem in using existing models is that they might not be applicable for developing countries, due to their different context and hence their different set of
requirements. Therefore, there is a strong need for developing a conceptual framework that maps out a clearer picture of the specific needs and requirements in developing countries.

The development of E-Government depends on different drivers such as technology, environment as well as the available organisation’s technology system at place which will help the organisation to adopt implementation of E-government. If the technology is not developed, no way e-government can be implemented. Environment also can force the organisation to adopt e-government but all of them i.e. technology and environment depend on political will of the nation. Other important factors to consider in the development of e-government include infrastructure, law and public policy, digital divide, e-literacy, accessibility, trust, privacy, security, transparency, interoperability as well as experts needed for e-government. The effective application of E-Government will lead to several outcomes include, to increase accountability to the public servants and the Government as a whole, this is because, applying the use of ICT in the public office will also mean showing who is responsible in what task, and the clients who are the citizen will be able to comment or to post their opinions or complaints in official websites, also the easy access of information from the Government to the citizen through networks like websites, and will also reduce the bureaucracy and delays in decision making, therefore its time saving for both the public servants and the clients. E-Government will also improve service delivery; for example if all the vital documents of public servants will be placed in the network of database, this will help to get their rights during promotions, retirement, terminations or death, because all the documents will be available in the network all of these will lead to the strengthening of democracy because people the citizen will be satisfied on what their Government is doing to serve them. Figure 2.1 presents the conceptual framework for this study.
**Figure 2.2: A Conceptual Framework for the Study**

**Ingredients**
- Infrastructure development
- Law and public policy
- Digital divide
- E-literacy,
- Accessibility
- Trust,
- Privacy,
- Security
- Transparency
- Interoperability,

**DRIVERS**
- Technology
- Organisation
- Environment

**Outcome**
- Increase accountability
- Strengthening democracy
- Easy access of information
- Cost reduction.
- Time saving
- Improved service delivery

**E-Government**

**Source:** Researcher (2013)
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research is a systematic process of inquiry to explore and discover knowledge about something happening or existing in society, science or nature (Neuman, 1994). The research methodology as identified by Remenyi et al. (1998) is the procedural framework within which the research is conducted. Some see the research methodology as the approach taken to research. However, the choice of an appropriate research methodology is a basic requirement in order to achieve a final result of high quality (AL-Shehry et al., 2006). There is no single ideal solution; there are a series of compromises (McGrath et al., 1982), and each research design will have its advantages and disadvantages.

3.2 Research Design

A research design is the arrangement of conditions for collecting and analysis of data in a manner that aims to combine relevance to the research purpose with economy. It is a conceptual structure within which research is conducted whereby it constitutes the blueprint for collection, measurement and analysis of data (Kothari, 2004). There are various research designs that are used in research including survey design, case study design, experimental and quasi-experimental design.

In undertaking this study, the researcher used a case study design instead of other type of research design because it may allow the collection of a large amount of data with less cost and the researcher will have more control over the research process. It emphasizes a full analysis of limited events or conditions and their interrelation (Kothari, 2004).

3.3 The Study Area

Data were collected at the President’s Office-Public Service Management (PO-PSM). The role of this office is to assist the Head of the Public Service (the Chief
Secretary) in matters of personnel and administration pertaining to Public Service in the entire government system. According to the Presidential Order of 1993 on Ministerial Responsibilities, the specific functions of PO-PSM embrace Administrative & Personnel Policy, Administration of Public Service, Co-ordination of Training and Recruitment, Improvement of efficiency and effectiveness of delivery of public service and Human Capital.

The area selected was in a position to provide views and insights regarding e-strategies, polices, drivers and barriers. The staff in these organisations were able to describe in detail the current situation and had clear ideas about how things should work in the future. This was expressed objectively in the form of words, phrases or text; as in data provided in documents. There was a sufficient amount of documentary data in papers, presentations and reports. Further the study area was chosen due to familiarity and convenience of a researcher to access information.

3.4 The Study Population

Population refers to an entire group of people, events or things the researcher desires to investigate. It refers to all individuals, things, events, documents or observation belonging to designated category characterizing specific attributes which a particular study should cover (Wilkinson and Bhandarkar, 2005). In this study, population included workers from President’s Office-Public Service Management (about 300 employees).

3.5 The Sample and Sampling Procedure

Sampling is about what and who will be studied or observed in the whole world of potential observation, representing only a fraction of them (Babbie, 1992). The sampling procedure provides the greatest assurance that the elements and/or unit of analysis selected are a representative sample of the population from which they were drawn and non-random sampling procedure is the one whose application involves only some likeliness between those selected for a study and the larger group, the population (Kester and Chambua, 1993).
In this study, two different types of random and purposive sampling were used in order to meet its various needs. First, purposive sampling were used primarily to select respondents who held managerial positions and whom the researcher thought were knowledgeable individuals concerning e-government issues. Second, random sampling was used to capture officials who were readily accessible respondents and sometimes when the targeted respondents were not available.

3.5.1 Sample size

The sample included 50 respondents; 30 were drawn from management and 20 from lower level cadres. Out of these 30 from the management, 10 were Heads of Departments coming from administration and 20 from heads of sections. Others 20 include personal secretaries and staff as shown in Table 3.1 below.

Table 3.1: Sample Distribution by Occupation

<table>
<thead>
<tr>
<th>Type of respondents</th>
<th>Frequency</th>
<th>%</th>
<th>Sampling Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heads of Departments</td>
<td>10</td>
<td>20</td>
<td>Purposive</td>
</tr>
<tr>
<td>Heads of Sections</td>
<td>20</td>
<td>40</td>
<td>Purpose</td>
</tr>
<tr>
<td>Personal Secretaries</td>
<td>10</td>
<td>20</td>
<td>Random</td>
</tr>
<tr>
<td>Staff</td>
<td>10</td>
<td>20</td>
<td>Random</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
<td></td>
</tr>
</tbody>
</table>

3.5.2 Sampling Techniques

This study employed purposive and random sampling. The researcher used random sampling for personal secretaries and staff which gave all members of population equal chance of been represented in the study. Name of each element were written from the staff book the finite population on a slip of paper, and put the slips of paper so prepared into a box and mixed them thoroughly and then drew without looking the required number of slips for the sample one after the other without replacement. The researcher made sure that in successive drawings each of the remaining elements of the population has the same chance of being selected. This gave out the representative sample of the whole population. Purposive sampling was used on head of sections as well as the head of departments as the researcher thought were knowledgeable individuals concerning e-government issues.
3.6 Data Collection Techniques

A combination of methods was used in data collection; this is a systematic collection of information concerning the problem under the study. In order to obtain primary data, interviews were conducted and these data supplemented secondary data as the basis for the theoretical and practical analysis of the problem.

3.6.1 Primary Data

The researcher used structured questionnaires, and guided interviews to collect data.

3.6.1.1 Questionnaire

The questionnaire method is the method that permits the use of a set of questions to collect data and carry out the social research. Kothari, (2004) argues that a questionnaire consists of a number of questions printed or typed in a definite order on a form or set of forms. This method of data collection was used to respondents that were busy. Appendices I provide the questionnaires.

In order to validate the questionnaire, the researcher conducted a pilot/test of the questionnaire before collecting data using questionnaires, in order to ensure that this instrument for data collection is good for the study as the research objectives needed. Most essentially, piloting was done in order to refine the questionnaire so that respondents have no difficulties in answering the questions.

The group of people who were involved at the pilot stage were OP-PSM staff to test the questionnaire because they fit some of the profiles of the respondents. Piloting the study was used to provide some idea of the questionnaire’s features validity the extent to which the questionnaire was good.

3.6.1.2 Interview

Interview refers to the verbal interaction between interviewer and interviewee. This is designed to collect information, views and an opinion from respondents (Kothari, 2004). Also interview is the face to face interaction between the researcher and
respondents (Mugenda, 2003). The researcher did an interactive interview that was in some instances aided by the interview guide. An interview guide had open ended questions so as to obtain additional information to supplement the information obtained by questionnaire (Appendix II). The semi structured interview is a qualitative technique of interviewing that may combine elements of structured and unstructured interviewing (Hill et al, 2003). This instrument was used because of the flexibility it offers of using open ended questions as stated above with an attention to explore the responses in greater depth (Meho, 2006). In addition, this design permits a face to face communication between the researcher and respondents while satisfying the goal of qualitative research whose objective is to understand phenomena from the point of view of those who live in it (Clark, 2004).

3.6.2 Secondary Data

The researcher used material from secondary sources such as library sources e.g. Books, newspapers, magazine, journals as well as internet and official records.

Secondary data analysis helped to save time that would otherwise be spent collecting data and, particularly in the case of quantitative data, it provided more and quality databases for research in order to collect data. The benefit acquired by using secondary data is that much of the background work needed has been already been carried out.

This wealth of background work means that secondary data generally have a pre-established degree of validity and reliability which need not be re-examined by the researcher who is re-using such data. Furthermore, secondary data helped in research design of subsequent primary research and it provided a baseline with which the collected primary data was compared.

3.7 Data Analysis

The data was scientifically analysed to throw light on the research questions and objectives. The analysis involved quantitative data by using Statistical Packaging for Social Science (SPSS). Qualitative information gathered through elaborated
collection methods was organised and summarised daily in the field. Content analysis was also be used to analyse qualitative data from in-depth interviews. The analysis focused on the study themes and tendencies portrayed on the content of information collected and observation made in the field.

At the coding stage, data was first reduced to a manageable level. Indexing/cording refers to as a process marking data with symbols, descriptive words and category names to allow separation of data into relevant themes (Johnson and Larry, 2009). The indexing/ cording stage was an important exercise as it helped the researcher to assess the level of validity and reliability of the data collected. Consequently, at the coding stage, some data were simplified, some were emphasized and others were found not relevant to the study and were eliminated.

The cording process was followed by a process of charting. This process of charting helped the researcher to display and organize the newly themed data. According to Miles and Huberman (1994), arranging text in charts, diagrams or matrices allowed for a new way of sorting and understanding data. The last stage included the mapping and interpretation of data. This stage has been defined as the process of searching for patterns, associations, concepts and, most importantly, the data interpretation. This follows researcher to explain a particular social reality that he/she set out to study (Lacey and Luff, 2001)

3.8 Ethical Consideration

Research studies undertaken at the Mzumbe University necessitate a research process that affirms to ethics. These ethics demand that negotiation with participants be undertaken. Therefore, the interactions with some participants and some key informants in this study was confidential and they are not identified in the report.
CHAPTER FOUR

PRESENTATION AND DISCUSSION OF THE FINDINGS

4.1 Introduction

This chapter presents the findings, analysis and discussion of the findings that were obtained through questionnaires and interviews. The findings are based on the objectives of the study which were to explore the roles played by electronic government in delivery of services, to identify the challenges facing the Ministry in the adoption of electronic government and to examine the availability of resources needed for implementation of e-Government.

The chapter starts by presenting the characteristics of the sample population, focusing on age, sex, and educational background. The aim is to reveal the type of population that responded to the questions. Other sections in this chapter include: the advantage of e-Government, challenges facing implementation of e-Government as well as strategies to address those challenges.

4.2 The Profile of the Study Area

4.2.1 Functional Roles and Scope

The study was conducted at the President's Office, Public Service Management (PO-PSM). The President's Office, Public Service Management (PO-PSM) is a Ministry under President's Office. Its chief executive and accounting officer is the Permanent Secretary, who has a workforce of about 300 employees. Formerly known as the Civil Service Department, it was transformed into President's Office, Public Service Management (PO-PSM) in the year 2003 to conform to the newly enacted Public Service Act No. 8 of 2002. Along with the transformation, opportunity was taken to accommodate efficiency and effectiveness considerations in the Management of the Public Service, in particular implementation of the on-going Public Service Reforms and in provision of its services.
PO-PSM’s role is to assist the Head of the Public Service (the Chief Secretary) in matters of personnel and administration pertaining to Public Service in the entire government system. According to the Presidential Order of 1993 on Ministerial responsibilities, the specific function of PO-PSM embrace, administration, personnel policy. Administration of public services co-ordination of Training and recruitment, improvement of efficiency and effectiveness of delivery of public services. Given these specific functions, the scope of PO-PSM’s activities is to: Provide advisory services to Ministries, Departments and Regions; Formulate, prepare and monitor the implementation of administrative and personnel policies; Co-ordinate, monitor and administer all matters related to the allocation of human resources in the Public Service, notably recruitments; confirmations; appointments; promotions; training; discipline; terminations.

Further functions include develop the skills, knowledge and attitudes of public service personnel; instill and maintain ethical behavior and a higher level of integrity among public servants, to give the government a positive image; co-ordinate and control the effectiveness of training in the public service, and increase the quality of manpower running the economy, deal with policy analysis, research and review; generate a conducive working environment; review personnel and administrative policies and other related matters; and enhance work morale among public servants.

4.2.2 Rationale for Choosing OP-PSM

The criteria for selection was centred on the fact that the area is on the agenda for e-government implementation in Tanzania. Therefore the following criteria were regarded as a rationale behind;

**Valuable data and information**

The area selected were in a position to provide views and insights regarding e-strategies, polices, drivers and barriers. The staff in the office were able to describe in detail the current situation and had clear ideas about how things should work in the future. This was expressed subjectively in the form of words, phrases or text; as in data provided in documents. There was a sufficient amount of documentary data in
papers, presentations and reports. The author was allowed access to this, as well as to the data centres.

**History of ICT experience**

It is important to examine the research problem within the office having a record of ICT use. OP-PSM had varying degrees of experience in adopting technology. It had gone through the experience of introducing e-government initiatives.

**Ease of access**

Access to the office had to be considered. The research had time limitations and traditionally, the public offices have little tolerance for student requests. The professional relationships and network of the author significantly facilitated access to the area; more so than following customary official channels.

**Other factors**

The opinion and recommendations from academics and practitioners were very valuable and assured that the area is a good place for research purposes.

**4.2.3 Vision**

The vision of PO-PSM reflects the broader poverty reduction development agenda of the Government as stipulated in the National Strategy for Growth and Reduction of Poverty. The vision of PO-PSM is therefore stated as to become a global institution of excellence enabling Public Service in delivering quality services thereby contributing to the achievement of high economic growth, reduction of poverty and better well-being of all Tanzanians by the year 2025.
4.2.4 Mission

The mission of PO-PSM is to ensure that the Public Service is effectively and efficiently managed, through improved human resources management, systems and structures.

4.3 Characteristics of Respondents

Demographers and other social scientists have special interest in the age structure of a population, not only because it is a fundamental measure of population growth, but also as an instrument that helps to understand the relationship within the community and the way various activities are undertaken. While the age structure has enormous implication on the management of various resources and administrative functions, sex has influence on the prioritisation of the various services and participation in various activities in society. As such, age and sex were taken into consideration during this and the respondents who were included in this study were both grown-up and mature. The age categorization of respondents was as shown in Table 4.1.

Table 4.1: Age of Respondents

<table>
<thead>
<tr>
<th>Narration</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>24-35</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>36-45</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>46-60</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

*Source: Field Data (2013)*

Table 4.1 shows the age of the respondents; the table shows that 59% of respondents were between 24-35 years old followed by 31% of respondents ranging between 36-45 and 10% of respondents was between 46-60. The age was used to measure the ability of the respondent’s ability to accept IT. Since the number of employees ranging between 24-35 hold 59% which is a big number compared to other grade it is obviously that adaptation of e-government can be facilitated since this is the age which represents people that always grasp technological changes.
Positions of respondents were investigated. The focus was to check the composition of the respondents to see the reliability of the data collected. From the findings 30% were secretaries, 22% were human resources, 20% were IT specialist, 10% were Accountants and planning officer, 6% were internal auditors and 2% permanent secretary (Figure 4.1).

**Figure 4.2: Position of respondents**

![Graph showing positions of respondents]

*Source: Field Data (2013)*

### 4.4 The Importance of E-Government in Services delivery

#### 4.4.1 Respondents' Views on Importance of e-Government

In assessing whether the E-Government has importance in services delivery, the respondents who were asked gave the following results (Figure 4.2).
4.2 Advantages of e-Government

Apart from observing whether E-Government has importance in services delivery or not, the researcher continues to access what are those importance in services delivery. It is used to comprehensively simplify and improve the internal administrative operations of government and their relations with other bodies involved in public management and service delivery; facilitate public service interaction between government, citizens and other stakeholders (legislative bodies, private sector, civil society organisations, self-organised communities), thus enabling better citizen participation and overall monitoring and evaluation of decision-making processes and their implementation; and ensure inclusiveness and equal opportunity for all (Ferro et al, 2010).- Table 4.2 shows the results of the respondents.
Table 4.2: Roles of E-Government in Services Delivery

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed of services</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Up-to-date information</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Increase internal communications</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Access Vital information</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Increase transparency</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source: Field Data (2013)*

### 4.4.2.1 Improvement in Internal and External Communication

From Table 4.2 above, 30 percent of respondents acknowledged that due to the presence of IT, communication both internal and external has been improved as a result of availability of reliable internet. It was said that majority of departments, sections and units in Ministry have been connected to internet and so the electronic communication and feedback within is very fast. Before that communication was done through telephones but documents and other attachment could not reach the office on time.

One of the respondents in the Ministry said;

> “E-Government has simplified communication between departments, sectors and units at the council level, but also between the Regions management and ministerial level. Currently government officers are enjoying a legal information system, computerised human resource information system consisting of fully integrated organisation -wide network of human related data, information, services, data base, tools and transaction. Administration has increasingly been cost effective in terms of funds and time. There is an increased exposure to knowledge and information.”
From these findings, this goes in hands with Kitaw who acknowledged that E Government can facilitate access to information, freedom of expression, greater equity, efficiency, productivity growth and social inclusion (Kitaw, 2006).

4.4.2.2 Increased Transparency

Transparency is another contribution of E-Government as far as service delivery is concerned in government officers as stated by 14 percent of the respondents mostly from the department of human resources departments as the salary increase and promotions will not be secret. IT has as well minimized problems of storing and finding data from manual files which has resulted to on timely basis decision making thus the clients are satisfied with the services provided and the job for the staff is more simplified. Confidence among the citizens is being revived because through the presence of IT facilities like printers and photocopiers everything is done within the office so no need of telling the people to go and make photocopies in streets. Again some important documents are found already typed and printed so time is saved to a great deal and thus reviving the trust of the civil servants among the local communities.

This finding is supported by the fourth African Development Forum (held in Addis in October 2004) that produced a Consensus Statement declaring that e-Government is an important innovation for enhancing good governance and strengthening the democratic process. Also it support Jong and La Porte 2000 who said that More information delivered in a more timely fashion to citizens is expected to increase transparency of government, empowering citizens to more closely monitor government performance. Enhanced interactivity of the technology is also expected to improve government accountability as it makes government more responsive to the needs and demands of individual citizens.

4.4.2.3 Speed in Obtaining Services

This role though mentioned by most of respondent as a big role 40% of respondents supported this. Respondents claimed that currently the environment for one to register his business has been improved thus attracting many citizens to open up
centers for businesses. Before this it took a lot of time for the new employee to enter into payrolls since all data were entered at the Ministry only. But nowadays all government offices from local and central government are processing all information concerning their employees. This has reduced movement of officers from their offices to head office for this process which reduces the time for such process. Other researchers argued that some improvements noted from ICT usage include timely delivery of data and timely feedback (Jager and Reijswoud, 2006).

From focus group discussion one said;

"...E-Government reduces bureaucracy since you communicate through computer without direct touch with the one who gives the services, this helps the supplier of services to do his/her work without negotiation with the customer”

From interview one replied that “

"since the services is given direct through the computer without long travel from one place to follow the services, E-government gives timely services which is good and had value since late of services reduces the meaning and value of the services given”

Apart from the above, the researcher passed through some documents, the information obtained from Tanzania e-government strategy manual from the ministry of public services Management 2009 illustrated the following:

Traditionally, the interactions between customers and their government typically took place within a government office. Now, with the use of ICT, it is possible to locate services centers close to locate service centers close to the beneficiaries of those services. such center may consist of a kiosk within a government agency, or a services may also be provided through the use of Personal Computers (PC) connected through the internet, or mobile telephones using internet or texting technologies, or traditional telephones using automated interactive response systems, each of which allow customers to access services at any location and even while on the move.
With e-Government, connected government can become a reality as work processes are streamlined across the entire government. Work processes which were poorly conceived could be optimised across the Government and where possible, harmonizing and integrating them so that they perform seamlessly to meet the needs of stakeholder Government Ministries, Departments and Agents (MDA) would be able to operate in a collaborative, connected manner, rather than in isolation from each other. The considerable benefits from a more connected approach include more responsive services delivery and the ability to quickly deploy services to different sites, including remote locations according to emerging needs. By presenting a consistent and unified front, the government would be able to effectively address the common frustration experienced by its customers when attempting to obtain services and relevant information on procedures.

**4.4.3 Disadvantages of e-Government**

Apart from the roles played by E-Government in services delivery, the researcher tried to ask whether there are disadvantages of introducing E-Government. The figure 4.3 shows the results.

*Source: Field Data (2013)*
Figure 4.1 above shows that 50% of the respondents still fear to lose their position and jobs. This is still a big problem since many of them cannot be ready to implement this program. Among them 30% said that IT increases cost in government of buying computer, maintenance, paying for internet and other computer accessories. Apart from these other mention problems of network, 20% supported this by saying that incase of network problems it makes work to stop.

From focus group Discussion done with some of the IT officers at the ministry, revealed that some of the officers are not willing to support this program since they fear of losing their positions and other are losing income. Good example are officers who were traveling from local areas to bring the datasheets and other employees documents, they were getting per diem for such activities but now they are not getting such income since everything is done on their office and send them through internet.

### 4.5 Resources Needed for Implementation of E-Government

The third objective of the study was to examine the availability of resources for E-Government implementation. The result are as shown in Figure 4.4.

*Source: Field Data (2013)*
As shown in Figure 4.4 above 50% of respondents mentioned computers is the most important facility for the implementation of E-Government and this facility is available at their office for 50%. Other 30% responded on scanner and 20% on printers. From the respondents these facilities can help the E-Government to be implemented.

Basing on the collected information, respondents feel that IT facilities are there but they are not adequate. It was found that in many departments, units and sections as shown in Figure 4.4 there are several facilities that are used in improving the efficiency and effectiveness in service delivery. In the discussion with the respondents about whether the present ICT facilities are adequate, one respondent had this to say:-

“Electricity is one of important aspect for the implementation of E-Government but it is still a big problem in this nation, other areas there are no electricity at all and for the areas where there are it is not stable for all the time so it is important for the government to ensure stable electricity supply”

4.6 The Use of E-Government in Service Delivery

In the 1990s the term ‘service’ in western governments received a new connotation. Governments started to realize that citizen satisfaction with and confidence in government largely depended on the way in which governments interacted with their environment. In the way governments served their constituents. Government attracted many clichés; cumbersome, bureaucratic, opaque, non-transparent. The poor image of governments, caused by citizens and companies alike having to make (mostly obligatory) visits to different desks, submit applications, fill in multiple, complicated forms, coupled with the ever critical citizen, all meant it was time to change direction.

At the end of the nineties, the number of internet connections per household was growing exponentially and the online possibilities for society at large were increasing
likewise. Examples included booking holidays, shopping, virtual visits, extracting information, communicating by e-mail, messaging, chatting and personal web pages.

Governments also slowly started setting up websites. The first-generation web sites mainly had basic information such as statistics and could be considered digital municipality brochures. The development of digital government started to take on form. A general term for this modernization process using the internet was called e-government. Goals focused on:

1) Transparency and administrative renewal;
2) Improving quality of service;
3) Efficiency.

E-government is important for the delivery of services since it lead to the following;

**Greater choice**

Providing citizens with a greater range of services and delivery channels such as the Internet, call centres, and face to face contacts which better meets their individual needs and preferences;

**Better accessibility**

Giving citizens greater access to the range of services delivered by departments by providing better, easier to use information on-line and joining up services at the point of delivery;

**More convenience**

providing services in a way which suits citizens' and businesses' needs for example, by providing services on-line, 24 hours a day seven days a week, enabling people to obtain information and carry out transactions with departments when it is convenient for them to do so;
**Faster delivery**

providing faster more accurate services for example, on-line services which enable citizens to obtain information more quickly than by post or by visiting a government office; and by electronic data interchange which enables businesses to transmit large amounts of data quickly and easily to departments; and

**Improved efficiency**

Replacing manual processing of routine high volume work by IT systems should reduce staff requirements and deliver financial savings or allow staff to be redeployed to other priorities. It can also be used to make the purchasing of goods and services more efficient.

### 4.7 Challenges facing Implementation of E-government

The first research objective was to identify the challenges experienced in implementing E-Government. From literatures the researcher listed some of challenges facing the implementation of E-Government. Among the listed were staff unwillingness, lack of computer infrastructure, lack of money, lack of IT Knowledge, lack of technical staff and poor networking. From the respondents 30% said lack of computer and its accessories, 20% staff unwillingness, 18% poor networking, 14% insufficient, 10% lack of IT knowledge and 8% lack of technical staff. The Figure 4.5 below shows the results
4.7.1 Lack of Computer Facilities

This was stated by 30 percent of the respondents. Some departments and sections at Office of the President Public Services Management had few computers for instance some workers are sharing one computer. Staff in those work places complained that sharing of few computers delays the activities. Worse enough, some sections in those departments do not have computers at all. This problem affects service delivery as stated by respondents. Accordingly, this is related to shortage of funds to buy computers for all workers in departments. ICT unit cannot make major improvements needed in its section because it does not have the budget for its own rather it continues servicing computers for day to day operations. Concerning computer facilities, one respondent said;

“\There was a delay concerning delivery of services to the people especially those entering into payrolls as well as those who were promoted it took from two to four months. Currently things are different because the present management has seen the significance of service provision to our clients in a quality and immediate manner. At least now in every department there is a computer which is connected to internet and other related equipment all of which afford effectiveness and efficiency in dealing with our clients. However, one or two computers are not enough to that extent because other
departments could need more computers and some other facilities something that the Administration could consider” (anonymous)

4.7.2 Staff Unwillingness to Adopt IT

This is another challenge facing implementation of E-Government as stated by 20 percent of respondents. Some of the respondents who stated this challenge said that computers will make them lose their position as it happened to other private institutions such as banks in which after the introduction of computers some other staff were laid off. This goes in hands with Tanzania Institute of Education, 1996 which shows that “the disadvantage of computers is that it throws a large number of employees out of their jobs.

To copy with this it is better to agree with Bea and Matotay (2010) who argued that during early phases of instating ICT in an organisation there prevails a limited acceptance both from the decision makers as well as by the staff. Training is the only mechanism to remove the resistance as contended in the statement that “positive results could overcome the employees’ resistance and fears and demonstrate that the allocated funds for IT could bring immediate return in terms of increased efficiency and reduction of operative costs.

4.7.3 Poor Network Connectivity

This challenge scored 30 percentages of respondents. According to the ministries, it must save the society many of them are at Local areas in Tanzania. In order to perform this, it must be connected by all areas in Tanzania concerning human resource issues. In performing this activity they have been facing networking connectivity among sectors. The lack of internet connectivity between the departments is said to delay communication. This is to be addressed by networking all departments through installing wireless network. All respondents from IT unit supported the contention by arguing that the above is a good effort to improve communication and service delivery together with widening up the scope of IT.
4.7.4 Shortage of Funds

Furthermore, shortage of funds for purchasing computers, their accessories and training were among the challenges that are facing E-Government implementation. From respondents 14% of respondents indicated this as a challenge facing them.

4.7.5 Shortage of ICT Personnel and Lack of Computer Skills

This challenge was stated by 10 percent of respondents. Currently IT unit has 5 staffs which are not enough since they have to serve a lot of customers in central Government as well as local government. One among the respondents in IT department said;

"Since our roles is to connect and receive information from several areas of our customers, we are facing a lot of problem since many of employees in Human resource department in central as well as local Government have no IT knowledge. Other can be trained but others cannot, and those who can fund is still a big problem”

This supports the finding of previous researchers at Kinondoni Municipal Council that scarcity of highly trained ICT professionals affect performance of ICT initiatives in Tanzania (Camni, 2006 cited in Bea and Matotay, 2010)

Apart from the above findings, results from ministry’s manual revealed that, many of MDA websites are in place and majority of them are still in the ‘presence’ phase of the e-government maturity model. There are clear indications that demand for ICT applications are high in the MDAs. To date, however, only few operational systems have been deployed. Some MDAs have very basic office automation support due to lack of ICT infrastructure and expertise. There is a common email platform to facilitate government-wide electronic communication but it is not widely used and other communication tools such as intranet and video conferencing have not been considered. Government-wide network project is in progress but need to be accelerated. Currently, only 7 MDAs are connected but there is no clear road map for
the rest of the other MDAs and LGAs to be networked. The manual listed some of obstacles as follows.

a) In most cases ICT is perceived as a non-essential support tool and is not aligned to work processes or service delivery. This has resulted in low strategic focus and rudimentary use of ICT in many of MDAs.

b) As there is no established ICT architecture, integration and standardization are not achieved resulting in low consistency of ICT applications and escalating support cost.

c) With the exception of a few MDAs, ICT literacy of public sector at all levels is also low. The low readiness of Government employees to embrace ICT hinders the deployment of ICT systems and poor usage.

d) The level of current ICT many power and capacity are inadequate to create significant impact. ICT units in MDA and LGA and across the public sector need both the advanced technical and business management skills to facilitate the innovative use of ICT.

e) Legislation to regulate electronic transactions and protect electronic information are not in place currently. This has resulted in the low confidence in the use of ICT to enable electronic service and perception of poor information security.

f) The current ICT industry is at nascent stage and could impede growth of e-government initiatives if not further developed. Without a competent local ICT industry, the continued dependency on foreign expertise will increase cost of ICT adoption.

4.7.6 Bureaucracy and Flexibility
The move to new forms of networked government is not easy when the public sector is characterised with bureaucracy, centralisation and a large and complex structure. Many interviewees agreed that the government systems are bureaucratic, slow and not yet ready to accept innovation. One interviewee said:
“Our public organisations are characterised with high levels of bureaucracy and this is a huge challenge for top managers to make the change”

However, some seem to be more optimistic. A senior manager said:

“All newly established government organisations are built according to the modern organisation structure. As for other organisations, they are responsible for taking decisions and making suitable changes to enable modernisation in order to cope with the new features of the government”

These comments referred to the decision making at organisational level, which is another challenging issue. Taking decisions in the public sector context is very difficult. The procedures are inflexible and this rigidity creates inefficiency in the decision making process. According to one interviewee:

“The aim of these procedures is to avoid errors and mistakes in the decision process; in fact, it is causing delay and damage that is very hard to overcome”

Another interviewee explained further:

“Notwithstanding the need for introducing on e-government tool … complexity, inflexibility and bureaucracy are already hindering organisations from improving their efficiency. However, we are always trying to study other experiences and best practices in the region, but the real benefit was achieved due to collaboration with the private sector, which offered very good lessons in terms of managerial methods and procedures.”

A number of interviewees pointed out that the public sector in Tanzania controls and delivers most basic services for its citizens and remains far from being fast, efficient and flexible. But, they also highlighted the need to consider that the public sector always acts in a different way from the private sector.
4.8 Strategies to Improve E-Government Implementation

The researcher tried to ask several questions from respondent on what must be done to facilitate implementation of E-government in Tanzania. Among the suggestions are shown in the figure 4.6.

From the Figure 4.6 above, 30% of respondents suggested increase of computers and their accessories, 24% suggested to increase budget on IT training and facilities purchase, 22% suggested increase of technical staff, 14% suggested the improve of electricity supply so as to have reliable electricity supply in Tanzania in general while 10% suggested continuous training on E-government as well as IT in general IT department at the ministry suggested that:

“Since we are dealing with customers from different government sector, we have been facing lack of IT knowledge and lack of computer facilities hence it is our suggestion that these things must hold a big percentage if we want this programme to be fully implemented”
The findings presented in this chapter have been discussed in view of the three objectives of the study notably; to determine the challenges facing Tanzania in Adoption of Electronic government, Explore the roles played by Electronic Government in delivery of services in Tanzania Public organisation and examine the availability of resources needed for implementation of E-Government. The study has managed to answer all its study questions in relation to the said objectives.
CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusion and recommendations of the study. The findings of all three objectives have been discussed thoroughly in chapter four, these objectives were, first to determine the challenges facing Tanzania in adoption of electronic Government, the second objective was to explore the roles played by electronic government in delivery of services in Tanzania public service, and the last was to examine the availability of resources needed for implementation of E-Government. The study has tried to answer all its questions in relation to the said objectives.

5.2 Summary of Findings

The study consists of five chapters, which is chapter one dealing with introduction and background. Chapter two consisting literature review, chapter three research methodology, chapter four findings and discussion as well as chapter five which deal with summary, conclusions and recommendation.

The research was a case study dealing with E-Government problems in Tanzania taking ministry of State, President’s office- Public services management as a case study where by Purposive sampling was used to select the participants. The samples of 50 respondents were selected whereby among the 50 respondents, 30 were drawn from management and 20 from lower level staff. Out of these 30 from the management, 10 were Heads of Departments coming from administration and 20 from heads of departments. Others 20 include personal secretaries and other normal workers.

Several methods for data collection were applied, among them being in-depth interview, and structured questionnaires where by SPSS computer software was used to analyse data collected. As indicated in chapter four several constraints confronting Tanzania public services ministry in putting this new technology in place thus
hindering the goal were noted. These include shortage of IT personnel, inadequate IT facilities, lack of computer skills for some of the staff, poor departmental IT network connectivity, unwillingness of staff to cope with ICT, unstable electricity supply and regular power cut-offs and lack of enough funds for purchasing facilities as well as training staffs on e-government.

With regard to the above challenges, some suggestions have been given on how to address them including training the staff, and changing the work culture within the Ministry. This will help reducing unnecessary fear and resistance of staff to ICT inception as argued by other researchers that “ICT will enhance service delivery and boost performance only if it is accompanied by a change in mindset and work culture among the employees (Cammi, 2006 cited in Bea and Matotay, 2010).

The role of E-Government also was investigated in the study where by several advantages were observed. Those asked on whether e-Government is important or not, the results shows that 50% E-Government is important, 26% said average, 10% said very important while 14% said not important. Those indicated importance listed them as speed of services, up-to date information, increase internal communication, access to vital information and increase transparency.

As stated in chapter four, 50 percent of the study population indicated the availability of computer 30 % indicated the availability of scanner and 20% indicated the availability of printers. Apart from the available facilities respondents indicated that, computer are there for 50% and scanner for 30% and 20% of the requirements. This showing that available facilities are not enough.

Apart from the mentioned facilities respondents suggested that budget should be increased for E-Government implementations, computer and their accessories should be increased, reliable electricity supply should be ensured as well as technical staff and increase continuous training on E-Government issues.
5.2 Conclusion

Tanzania is a developing country which is increasingly changing the nature of the government itself from an organisation centered in bureaucracy to an organisation centered on client services instituting the decentralization by devolution paradigm and the use of information something which creates value. Inevitably this evolution is to go hand in hand with the reduction of the digital – divide because the world is changing at a very high speed.

Some importance of e-Government listed speed of services, up-to date information, increase internal communication, access to vital information and increase transparency. Apart from advantages others identifies several disadvantages as increases costs, make other lose their jobs as well as in case of network problems it makes work to stop. This support Arvanitis and Hollenstein (2001) who conducted a survey on the structure of organisations that have put in place maximum “ICT model” among the advantages by Arvanitis were, Reduction of running costs; time turned to be very economical, Strong customer- supplier relationship, Increased satisfaction of the organisational members/stakeholders on the services and Rate of absorbing technology from other firms to be increased. Also it goes in hands with Breen (2000), who said that application of e-government in public sector provides opportunity and benefit to improve quality and accessibility of services to the citizens.

In the ministry several ICT facilities were found, among them were computers, fax, printers, telephones as well as scanners. These show that e-Government can be implemented due to availability of some important facilities.

E-Government faces some challenges. These include shortage of funds to install facilities, shortage of technical and skilled personnel, poor electricity supply, transfer of IT favoring top management officials and fear among some staff of getting along with IT infrastructure

With regard to the challenges, some suggestions have been given on how to address them including training the staff, and changing the work culture within the council.
This will help reducing unnecessary fear and resistance of staff to ICT inception as argued by other researchers that “ICT will enhance service delivery and boost performance only if it is accompanied by a change in mindset and work culture among the employees (Cammi, 2006 cited in Bea and Matotay, 2010). In para 5.3 below; some recommendations have been given to improve the implementation of E-government in Tanzania.

5.3 Recommendations

Though other issues are beyond the other government management capacity such as poor electricity supply, network failures and budget deficit, the Central government should undertake initiatives to speed up rural electrification and adopt Solar Energy as a prerequisite to ICT service provision like computer and Internet access.

As the main focus of the recommendations is to address (by reducing and eventually removing) the challenges to better implementing E-Government for the advantages obtained from E-Government in the world. From the findings the researcher recommended the following

i. The government should set enough money for the implementation of E-government in several area in Tanzania Enough personnel should be prepared for the e-government operations

ii. Government should make sure that stable electricity should be emphasized in different area in Tanzania

iii. Training should be conducted in several areas in Tanzania so as to understand its advantages and reduces some obstacles and increase political will.

iv. The Central Government must clearly prioritize ICT infrastructure and connectivity national-wide in terms of budget allocations

v. The Human Resource Information Support System (HURISS) available under the PO- Public Services Management should be
spread throughout the country in every LGA. The Personnel Data Form may allow for reduction of paying salaries to ghost-workers which does not only take a lot of public funds but also frustrate other staff and the general public in general.

Apart from the above other things must be considered, among them are:

**Equal access**

The implementation of ICT in government processes must ensure that all citizens will have equal access; for this reason factors such as geographical location, the issue of time and diversity must be taken into account. Requires; developing shared internal facilities that will enable service delivery channels to be available across the general public.

**Ease of use**

Applications that are to be implemented must be oriented towards citizens and hence, be user friendly. It Requires: providing user-friendly citizen-care and Business-Centric services for all.

**Benefit realisation and involvement of all stakeholders**

Applications should ensure that the benefits obtained by citizens from using e-government services will be greater than those from visiting government offices in person. Thus e-government investments need to be justifiable in terms of how they help citizens and tax payers. Requires; ensuring services are aligned to client expectations and address pertinent needs.

**Security and privacy**

When implementing applications, consideration should be given on using security and privacy mechanism to ensure the proper use and handling of personal information and transactions.
Partnership and outsourcing

The private sectors can assist the state in providing e-government solutions, as well as in training government employees.

Interoperability

Each government department will be responsible for maintaining its electronic services and data-sets, as well as for ensuring that newly implemented systems leverage existing systems and aligned with government guidelines and standards set.
REFERENCES


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Parisopoulos, K., Tambouris, E. and Tarabanis, K. (2007), "Analyzing and comparing European e-government strategies", Informatics and Telematics Institute, Center for Research and Technology Hellas,


WSIS (2005), Tunis agenda for the information society, WSIS-05/TUNIS/DOC/6, World Summit on the Information Society, Tunis.
Appendix I: Questionnaire

Introduction

Dear respondent, the researcher is a student of Master Degree in Public Administration at Mzumbe University. As part of her degree program, she is required to assess the Adoption of Electronic Government in Tanzania Opportunities and Obstacles at the President’s Office Public Service Management. You are humbly requested to respond to the following questions as honestly as possible so that the reliable information is obtained for better findings of the study. The information you will give will be manipulated confidentially and solely for the purpose of the study.

Thanks in advance.

Section A: Respondents Information

(Tick where appropriate)

1) Gender

Male .......... Female.............

2) Age

18-35 ( ) 36-45 ( ) 46-60 ( ) Above 60 ( )

3) What is your job position? .....................

4) How long have you been in that position?

0-1 year .......... 1-5 years ............. 5-10 years ............ Above 10 .......... Can’t remember .......

Section B: Challenges facing E-government Implementations

1. Are human resources enough for E-government implementation?

a) Yes ............

b) No .............
2. Is the government budget enough for the implementation of E-government?
   a) Yes………………
   b) No…………

3. Is communication infrastructure favorable for e-Government implementation in Tanzania?
   a) Yes……………
   b) No………..

4. Among the following are challenges facing e-government implementation
   1) Political will  2) Lack of infrastructures  3) lack of money  4) Others specify…..

Section C: Advantages delivered from e-Government

1. Introduction of e-government will reduce cost for services delivery
   a) Yes………………. b) No……………

2. Introduction of e-government will make other lose their positions
   a) Yes…. b) No…………

3. The followings are the advantages of e-government implementation
   a) Reduce bureaucracy b) increase good government c) improve quality of services d) Others specify…..

Section D: The extent in which the human resources use skills in setting priorities

1) Have you been trained about E-government?
   Yes (   ) No (   )
2) If yes, when and who sponsored it
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3) If no, what are your comments?
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4) In your own opinion, do you think the training was relevant to e-government implementation?
Yes (   )     No (   )

5) If yes, give reasons relating to how it has contributed toward improving your work.
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6) If no, suggest things to be done in order to improve your performance at the grassroots level.
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Section E: Possible implications of e-government towards solving socio-economic problem

1) What do you think will be the impact of E-government in Public organisation
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2) What do you think will be the impact of involving citizens in communicating their issues through Information technology
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3) What are your comments on what should be done to improve implementation of e-Government at your work
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4) Give challenges you think are affecting implementation E-government in Tanzania
Appendix II: Interview Guide

1. Do you have a clear strategy in your organisation? And is there a clear vision?

2. What are the main objectives to achieve this vision?

3. Are the initiatives introduced according to a well-designed action plan?

4. Who participated in designing your organisation’s strategy and plan of action?

5. Do you have a reliable network in your organisation?

6. Are all departments and branches connected?

7. Are the branches in other provinces connected and linked to the network?

8. Do you have a website? If yes, what are the main services that you provide in your website? Do you provide online services?

9. Has your website been evaluated? If yes, what was the result of the assessment?
10. How do you collect your data? Do you follow a specific structure and procedures?
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11. How accurate is the collected data?
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12. Is the processed data of high quality? Do you use this data in the reports sent to higher levels?
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13. Do you follow specific standards? What type of standards do you apply?
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14. How do you deal with the security issues? Do you consider the applied security as high level?
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15. Did the initiatives in your organisation face any kind of resistance to change? How?
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16. Is the available information shared easily between departments and with other organisations?
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17. Do you have enough staff with adequate ICT skills?
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18. Do you provide any type of ICT training for your staff?……………………………………
19. Do you experience any bureaucratic systems and rigid procedures? If yes, please give some examples.

20. Does the top management have enough awareness about the new initiatives? And are they committed to the initiatives?

21. Do you suffer from “brain drain” and losing staff members?

22. Do you suffer from problems like illiteracy, low level of education? Are there any other cultural issues that influence the initiatives in your organisation?

23. Is the element of power used in any way to enforce the initiatives?

24. What do you provide to your employees to improve their working environment?

25. Do you risk introducing new ideas related to ICT even if there is no guarantee of success? If yes, please give examples.

26. How long did the initiatives in your organisation take to reach this stage? Were you able to wait for long term processes?

27. Do you work within a defined legal framework? How effective is it?
28. In your view, are there any other challenges or barriers your organisation faces to implement its e-government initiatives?

29. Has your organisation carried out any assessment or cost benefit analysis for these initiatives?

30. Finally, how do you imagine your organisation and the public sector of Tanzania in general will appear in 5 years’ time?