A SURVEY OF FACTORS HINDERING THE USE OF E-GOVERNMENT: A CASE OF SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

BY

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REG. NO: D61/P/7551/02

A MANAGEMENT RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT FOR THE AWARD OF THE DEGREE IN MASTER OF BUSINESS ADMINISTRATION (MBA).

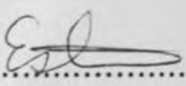SCHOOL OF BUSINESS,
UNIVERSITY OF NAIROBI.

NOVEMBER 2006

DECLARATION

This project is my original work and has never been presented for a degree award in any other University.
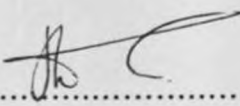
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This project has been submitted for examination with my approval as the University Supervisor.

Name: Mr. J.T Kariuki

Signature..Date.....8/11/06..................

DEDICATION

This work is affectionately dedicated to Ernest for his love, support, encouragement and inspiration throughout my MBA course and especially my research project.

May the Almighty God abundantly bless you.

ACKNOWLEDGEMENTS

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LIST OF ACRONYMS

ATMs   - Automated Teller Machines

CCK   - Communications Commission of Kenya

CEG   - Council for Excellence in Government

ETR   - Electronic Tax Registers

GIS   - Geographic Information Systems

GoK   - Government of Kenya

ICT   - Information and Communication Technology

ISPs   - Internet Service Providers

IT   - Information Technology

KP&TC   - Kenya Posts and Telecommunications Corporation

M&E   - Monitoring and Evaluation

MOEST   - Ministry of Education Science and Technology

PCK   - Postal Corporation of Kenya

US   - United States

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ABSTRACT

This study was undertaken with the objective of establishing the factors hindering the use of E-government specifically government to citizen (G2C). The study was conducted in the School of Business, University of Nairobi. In order to achieve this objective a sample of 200 respondents was picked from the target population using stratified, judgmental and random sampling techniques. Each respondent was asked to fill a questionnaire. The questionnaire had both structured and unstructured questions. The sample of respondents were first stratified into four categories namely academic staff, support/administrative staff, undergraduate students and post graduate students all who are in the school of business. In the case of students, module II students of the School of Business were selected using judgmental technique. This group is composed of students mainly working in various firms in Nairobi who are expected to use online services offered by the government. Data was analyzed using descriptive statistics through the use of frequencies and percentages. In addition factor analysis and cross tabulation were also used in analysis of data.

Results of the study show that, there were various factors that hindered the use of E-government by citizens. Some of the obstacles include inadequate online services, user attitudes, accessibility, security, frequent power interruption and lack of feedback mechanism. The use of factor analysis reduced these factors to four key factors. From the findings of the study, it was concluded that one of the major concerns of the citizens is the reliability of the website especially while relaying confidential information. It is imperative for the Kenyan government to build trust by increasing security features in the government based websites. Trust-building also requires that services are delivered efficiently and with minimum hassles. Bad connections, unreliable websites, poorly designed websites, and frequent power interruptions all serve to alienate the citizen from using the online services. The government should develop mechanisms that will ensure online services are accessible easily to all citizens including the physically challenged, women and youth.

In conclusion, successful implementation of online services by the government to citizens will begin by providing services that are citizen-oriented and being proactive in communicating online services to citizens.

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Governments generate huge volumes of information, much of it useful to its citizens. The Internet and other advanced technologies can be utilized to bring this information quickly and more directly to citizens (Asia Oceania Electronic Marketplace Association, 2005). Besides, citizens all over the world are demanding a more accountable, transparent, effective government that is responsive to their needs and one which will provide efficient services at minimum cost and bureaucracy. To aid in service delivery, governments have started to adapt the use of Information and Communication Technology (ICT) in their governance.

ICT plays a major role in enhancing economic and political development of a country. Productivity gains in the developed and developing world economies over the past two decades are to a great extent attributed to the impact of ICT (Kagwe, 2006). Apart from enhancing economic growth, ICT is an enabler in social development because it has the potential of generating additional jobs and employment opportunities in communication for a growing youthful population.

The impact of ICT is transforming the way in which businesses, the public and governments communicate (Council for Excellence in Government [CEG], 2000; Strover & Straubhaar, 2000). Innovations in ICT have led governments in developed countries to invest heavily in computers, peripheral equipment, software, advanced telecommunications systems and Internet technologies. For instance, the UK government aims to make all its services available electronically by 2007 and has laid out plans to invest £6 billion in Information Technology (National Statistics, 2004).

Innovations in ICT make use of technologies in the Internet and other digital tools. One such innovation that has had an impact in service delivery is Electronic government (E-government). E-government is a concept that emerged in the late 1990s and it refers to the application of ICTs to transform the efficiency, effectiveness, transparency and accountability of exchanges of information within the government (G2G), between government and citizens (G2C) and between government and businesses (G2B) both locally and abroad (Gakunu, 2004).

E-government can be used by governments to aid governance. Governance can be defined as the process through which institutions, businesses and citizen groups articulate their interests,

exercise their rights, obligations and mediate their differences (Mitullah and Waema, 2005). E-government helps to sustain this process by supporting tasks that involve complex decision making and implementation therein automating tedious and supporting new tasks and processes that did not exist before. Moreover, public expectations for fast and convenient service delivery and institutional needs for efficiency are motivating governments to experiment with E-government ventures (CEG, 2000; Center for Technology in Government [CTG], 1999).

The implementation of government to citizen (G2C) in Kenya will ensure speedy and efficient delivery of services by the government to citizens. This will be achieved through online services like dissemination of vital information and provision of online forms through websites to interact with citizens. G2C can be adopted in sectors like education, health, agricultural and tourism. Educational institutions such as the University of Nairobi, will benefit from this technology if services like relaying of information about loans facilities, examination results and provision of application forms are offered online.

1.2 Background of the School of Business - University of Nairobi
The inception of the University of Nairobi can be traced back to 1956, with the establishment of the Royal Technical College. An Act of parliament in 1970, saw the birth of "The University Of Nairobi".

The University is situated within the city of Nairobi. It boasts an average population of about twenty three thousand students consisting of both undergraduates and post graduates students. It is served by about six thousand members of staff, of whom, 25% constitute the academic staff. There are six campus colleges namely the College of Agriculture and Veterinary Sciences, the College of Architecture and Engineering, the College of Biological and Physical Sciences, the College of Education and External Studies, the College of Health Sciences, and the College of Humanities and Social Sciences. These campus colleges are composed of faculties, institutes and schools responsible for providing a varied academic curriculum. The School of Business formally Faculty of Commerce came into existence in the academic year 1956/57 as part of the former Royal Technical College which was inaugurated in 1956. Up to 1972, the School offered only the Bachelor of Commerce degree program with two options namely, Accounting and Business Administration. From 1972/3 academic year, the School started offering the Master of Business and Administration (MBA) program and subsequently the PhD studies. These programs are open to regular (government sponsored) students as well as self-sponsored students

in the newly introduced module II programs commonly known as parallel programs. From such a humble beginning, the School has grown to the current student population of over 4,200.

The School is under the College of Humanities and Social Sciences headquartered at the Main Campus of the University of Nairobi. This is where most of the module II programs are offered. Module II programs were launched to cope with the high demand of higher education in Kenya. The programs are offered in the evening and on weekends and have attracted students most of whom work in various firms in Nairobi and its environs.

Since 1988, the School moved to Lower Kabete where it has continued to operate and expand from. Currently, the School runs its programs in four locations, that is, Lower Kabete Campus, the Main Campus, Chiromo Campus and at Bandari Campus in Mombasa.

The School of Business, just like any other arm of the University, is on the fore front in championing ICT in its teaching methodologies. Its students are exposed to computer related courses and techniques. Therefore, a well executed online service delivery by the government, for instance, processing of loans, will go along way in assisting the university to carry out its operations in a more flexible and transparent manner (www.uonbi.ac.ke).

1.3 Statement of the Problem

The use of ICT in both the private and public sector has resulted in provision of quality services and reduction of costs (Timmers, 2004). These benefits are the motivation of the Kenyan government in setting up ambitious goals for the development and implementation of electronic service delivery to its citizens. Apart from the development of the Kenya's National draft ICT Policy (2003) and the E-government policy (2004), the government has developed policies for E-government leading to the application of ICT in government offices. These ICT policies lay down the framework for the development and application of E-government in Kenya. The government has also zero-rated tax on all imports of computers and software with the hope that this will encourage purchase of more computers. In addition, the government has created a new Ministry of Information and Communication whose activities among others are to promote the growth of ICT in both the private and public sector.

The private sector has incorporated ICT widely in sectors like banking through e-banking and in academic institutions through e-learning. The use of ICT is widespread in airline and health sectors through services like online booking and e-health respectively. On the other hand, the

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incorporation of ICT in the public sector has brought new attention to the ability of government agencies to coordinate and enable the creation, integration, management, sharing, and transfer of information within agencies and in government networks. The government has developed and implemented websites enabling citizens to access vital government information without having to travel to government offices, stand in long queues or pay bribes to be served. Citizens can also download forms like tax forms from the KRA website or download abstract and P3 forms from the Kenya police website (Okuttah, 2006).

Studies done in Kenya indicate that 95% of the Kenyan Ministries have websites (Mitullah and Waema, 2005). However, despite this impressive presence in the Internet, surveys indicate that there has been low level usage of online services by the citizens. For example, between January and July 2006 there were only 86,578 hits in the Kenya Revenue Authority (KRA) website. Furthermore, citizens still visited the tax offices nationwide to pick up tax forms instead of downloading them. Moreover, the Ministry of Information and Communication website receives an average of only 94 visitors daily. This is a clear indication that there is a low level usage of online services by the citizens (Kaaya, 2005). The question that comes to mind in regard to government to citizen (G2C) is: What could be hindering the citizens from using online services from the government? Hence the purpose of this study is to find out the factors that are hindering citizens from using online government services.

1.4 Objective of the Study
The objective of the study was to establish factors hindering the use of government to citizen (G2C).

1.5 Significance of the Study
This study will be useful to the Kenya Government and other governments through out the world in their bid to incorporate ICT and G2C in their operations especially in policy formulation and implementation.

This study will be important to the private sector since successful implementation of E-government will spur the economy and lead to creation of better products and services. This will enable new business opportunities to be created as the government offers online services.
This study will also be of great importance to academicians and future researchers who might be interested in carrying out further research in the same or related areas.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter covers studies carried out in Kenya and elsewhere in the world on E-government development and implementation. It examines the global overview of ICT industry, growth of E-government in Kenya, phases of E-government, success stories, benefits of E-government adoption and the challenges facing those who have adopted E-government.

2.1.1 Definition

E-government refers to the application of ICT to transform the efficiency, effectiveness, transparency and accountability of exchanges within government, between government and citizens and businesses locally and abroad and to empower citizens through access and use of information (Gakunu, 2004). According to West (2004), E-government can be described as the public sector use of the Internet to deliver services and information. E-government is intended to improve the delivery of government services to users using electronic means (Onunga, 2004).

2.1.2 Forms of E-government

There are three types of E-government:

Government to Citizen (G2C)

This level focuses on the government's ability to avail online access to information and services to citizens. Citizens are able to find what they need quickly and easily, and access information in minutes or seconds instead of days or hours. Online services such as renewal of licenses, downloading tax forms and P3 forms can reduce long queues at the offices and reduce bribery among public servants.

Government to Business (G2B)

Government to Business reduces burdens on businesses by providing one-stop access to information to facilitate business development and create a national economy with flexibility and competitiveness within the global markets.

Government to Government (G2G)

E-government focuses on enabling all levels of government to work easily with each other to better serve citizens. It involves the interaction between local government and the central

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government. The Local government needs to streamline its services and change civil service from being reactive to being proactive. This results to an open and accountable government.

2.2 Global Overview of ICT Industry

Information and Communication Technology (ICT) is the World's fastest growing economic activity. The sector has turned the globe into an increasingly interconnected network of individuals, firms, schools and governments communicating with each other through a variety of new channels in areas such as E-government, E-education and E-health (Muriuki, 2003).

In addition, rapid development of ICT accompanied by the convergence of telecommunications, broadcasting and computer technologies has created new products and services, as well as new ways of learning, entertainment and doing business. ICT has created a fundamental change in knowledge dissemination, social interaction, economic, business practices and political engagement. The rapid growth in ICT is evident from the fact that while it took the telephone close to 74 years to reach 50 million users, it took the World Wide Web, 4 years to reach the same number. Between 1995 and 1999, 88 million Internet connections were made compared to 15 million made between 1991 and 1994, an almost six-fold increase. In 2002, over 580 million people were estimated to have access to the Internet (United Nations, 2000).

Mobile telecommunication services are also increasing faster than fixed-line networks. There were less than 200 mobile operators around the world in 1992, yet by the end of 2001, there were over 600 operators. By the end of 2001, there were over 940 million mobile cellular subscribers around the world compared to just over one billion fixed telephone lines. China overtook the United States (US) in becoming the largest mobile telephone market in the world. Growth has also been robust in Africa where more than half the countries have more mobile lines as compared to fixed lines (Muriuki, 2003). Moreover, as a result of this growth, mobile computing is a potential technology that can be explored by the government in their bid to offer quick and efficient services. For example, providing a service where one can be able to inquire voter status or job vacancies that exist in government firms through sending a short message (sms) via a mobile phone.

2.3 ICT Growth in Kenya

In 1977, the East African Community under which the regional telecommunications services operated collapsed and as a result, the Government of Kenya established Kenya Posts and Telecommunications Corporation (KP&TC) to run the services. A telecommunications policy statement was issued in 1997 that set out the government vision on telecommunications development to the year 2015. In 1998, KP&TC was split into three legal entities, namely Telkom Kenya Limited, Postal Corporation of Kenya and the Communications Commission of Kenya (ICT Policy, 2004).

Kenya has made great strides in the expansion of ICT services. Through Telkom Kenya, the government is in the process of laying out a fibre optic cable in the country which will enable all government offices to be interconnected (Okuttah, 2006).

The growth of the ICT sector in Kenya has been significantly influenced by global trends and a government conscious effort to introduce ICT policies and reforms. The growth can be evaluated in terms of number of computers, fixed and mobile telephone lines, Internet Service Providers (ISPs), Internet users, broadcasting stations, and market share of each one of them (CCK 2004).

Postal Corporation of Kenya (PCK) has contributed to the growth of Internet access through set up of Internet access points in some of its 890 post offices countrywide. The government accepted the premise that private sector capital in a competitive environment will expand ICT sector. By April 2004, there were 73 registered ISPs, 16 of which were active, approximately 1,030,000 Internet users and over 1000 cyber cafes. There were also about 520,000 personal computers in use in government offices at the beginning of 2004 giving the number of computers per hundred inhabitants as 1.6 (ICT Policy, 2004).

Availability of trained manpower in ICT sector is an important resource. The Kenya government has introduced computer education in schools and other learning institutions, while the private sector has responded to the demand of skilled computer operators by setting up commercial computer training colleges in major urban centers all over the country (ICT Policy, 2004).

Whilst acknowledging that ICT is a primary instrument for realizing economic growth, Kenya offers attractive incentives and presents various investment opportunities for potential investors as it prepares to leverage ICT in its national priorities of growth and poverty reduction. Further, as an entry point to the regional market and a communications and financial hub for the region,

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Kenya also offers potential investors a wide market for products and services. The overall government objective is to optimize its contribution to the development of the Kenyan economy as a whole by ensuring the availability of efficient, reliable and affordable communication services throughout the country through the use of ICT (ICT Policy, 2004). The government has also developed a national ICT policy (2003) and E-government strategy (2004) that would address the issues that relate to the advancement of ICT thus contributing to the overall development agenda. In addition, there has been a waiver on duty on computers since February 2006 (Daily Nation, 2006).

2.4 E-Government Adoption in Kenya

Many studies have been done on the development of E-government. West (2004) carried out a research on global E-government and concluded that a great progress had been made as many nations are acknowledging the role of Internet in everyday life.

In Kenya, one of the Millennium Development Goals (MDG) is to develop partnership for development. To achieve this, the Kenya government has made efforts to enhance availability of new ICT technologies in private and public sectors. The private sector has incorporated ICT in service delivery more than the public sector, for instance, banks have started offering their services electronically through e-banking where services like online account inquiry, mobile phone top ups and payment of electricity bills are offered. Academic institutions have set up e-learning facilities for instance, students are able to register online and conduct learning over the Internet. Safaricom, the country's leading mobile service provider has incorporated ICT by enabling its customers to pay for services online. Indeed, these companies have learnt that use of ICT is not only effective, but efficient.

In the public sector, E-government is beginning to take root with most of the government offices are furnished with computers connected to the Internet. For instance, Kenya Power and Lighting (KPLC) has a service where one can make a bill inquiry online. Other government owned agencies like the Kenya Ports Authority (KPA) and the Kenya Revenue Authority (KRA) have computerized to speed up service delivery and enhance transparency. For instance, in 2005, KRA introduced the use of Electronic Tax Registers (ETR) to store tax information at the time of sale. Through the use of E-government technology, the government can develop systems that can effectively manage these tax registers online and be able to keep track of those businesses that evade taxes at the click of a mouse. Moreover, one can also download tax return forms from the

KRA website (www.kra.go.ke) thus reducing human interaction with KRA which usually is time consuming.

The use of E-government in the health sector – or e-health- has greatly improved the quality of services especially in the rural areas. The Ministry of Health and an NGO, AfriAfya, are working to provide services to all Kenyans through an improved electronic access to health information (Alare, 2005).

In 2006, the Kenya Police launched a website (http://www.kenyapolice.go.ke). This website enhances partnership with the public in the fight against crime by enabling citizens to readily access information on security issues. Other services like downloading of P3 forms and abstract forms for loss of property are also available online.

2.5 Phases of E-government Model

E-government is evolutionary in nature, involving multiple stages or phases of development. Various research entities have described four to six stages of E-government implementation. For instance, the World Bank describes three phases namely publish, interact and transact. Silcock (2001) describes six dynamic characteristics which are information publishing/dissemination, two-way transaction, multi-purpose portals, portal personalization, clustering of common services, full integration and enterprise transformation. However, the phases of E-government model has been summarized by UN (2002) which categorizes five phases as emerging, enhanced, interactive, transactional, and seamless (fully integrated).

2.5.1 Phase 1- Emerging

In this phase, governments create websites where a lot of information is published online beginning with policies, rules and regulations. These sites seek to disseminate information about government enabling citizens to readily access government information without having to visit government offices. The content is predominantly static and not necessarily in response to citizen expectations.

2.5.2 Phase 2- Enhanced

In this phase, the content of websites is dynamic as it is regularly updated. It is crucial that information like contacts be current.

2.5.3 Phase 3- Interactive

Most websites at this stage offer two way communications through basic services like e-mail contact information and downloadable feedback forms allowing users to interact with the government. Links to other related websites can also be found.

2.5.4 Phase 4- Transactional

In this phase, users can pay for services and other transactions online. The web sites are secured and accessible at all times.

2.5.5 Phase 5- Seamless

This phase is characterized by a full integration of e- services across administrative boundaries with links that can be assessed through a single central portal. The web pages are also customizable.

2.6 Challenges facing the use of E-government

Many nations offering online services face challenges in a variety of areas that hinder the ability to reach full potential in terms of accessibility and effectiveness.

2.6.1 High levels of Poverty

One of the challenges that face use of E-government globally is high levels of poverty. In many nations especially in Africa, majority of citizens are living below the poverty line and can hardly afford the basic needs. Technology is, therefore, perceived to be for the elite class. Besides, illiteracy levels are low and majority of citizens can not use computers to access online services. In addition, the cost of accessing online services is high causing only few citizens to afford the services. Not only are the costs for internet provision high but also costs associated with ICT equipment and inadequate infrastructure support.

Successful implementation of E-government requires a high level of investment. Millions of dollars have been invested to develop systems that will enable E-government services reach the citizens. In 2003, Kenya set aside US$ 50 million for a five year E-government project that would seek to connect all government offices and render online services to its citizens. (Okuttah, 2006)

2.6.2 Inadequate power supply

E-government technology relies on a stable supply and distribution of electrical power. In Kenya, power supply is limited to mostly the urban areas. Erratic and unstable nature of power supply affects many electrical appliances including computer systems. This poses as a great challenge facing users of E-government. Rural communities face significant access challenges as there are few internet access points thus limited rural electrification impede communication.

2.6.3 User attitudes

Failure to integrate ICT applications with organizational culture may cause ICT to become a distraction rather than a means of furthering development goals (Kirkman 1999). In India, part of the Income Tax Department's tax system was computerized. The project ran into difficulties due to political antagonisms among regional tax commissioners, the central tax board, management and unions. As a result, the information system was opposed by staff and finally collapsed (Institute on Governance, 1996).

Governments should not only put a large focus on getting the technology right but also a lot of resources should go to ensuring that services rendered are useful to the intended users. G2C initiative should involve all stakeholders from the civil society to the private sector in order to be successful.

At times, technology can be seen as a threat to civil servant's jobs. Resistance to change may impede E-government especially if the civil servants refuse to accept computer systems. The effectiveness and success of E-government will depend not only on the technology itself but also on the ways in which users are introduced to online services.

2.6.4 Security

Security and authentication are some of the major challenges being faced by UK especially when citizens have to reveal confidential information like income or tax details (Timmers, 2004). Expectations of privacy vary and can be violated by introduction of security measures. Commonly, security is implemented by identifying users and tracking their actions. The flow of information, especially between the government and its citizens is a confidential process and authentication measures may be considered invasive. Security measures should be selected and implemented with recognition of the rights and legitimate interests of others. This may involve balancing the security needs of citizens interacting with the government.

An ICT system, if not thought through fully, may lead to information being incompletely archived and preserved, or cause breaches of security and privacy. But most of all, implementation of E-government without regard for suitable access to all its citizens will create a digital divide.

2.6.5 Lack of ICT Skills

In Kenya, ICT skills in government offices are inadequate indicating a serious capacity problem for effective roll-out of E-government (Gakunu, 2004).

Training government officials is essential to minimize risks of causing errors during interaction with the E-government technology and also to facilitate the use of E-government by the citizens. Trained IT personnel bridge the gap between E-government technology and the typical end-user who is the citizen.

2.6.6 Poorly designed websites

According to a study done by West (2004) many governmental based websites are poorly designed and are not user- friendly. These websites have links that do not work and some links take a lot of time to load or lead users to incorrect sites. It is important for those designing these websites to ensure that they are user-friendly and that all links are properly functional leading users to their desired locations. Other websites are not regularly updated. The government should ensure that the information presented is accurate and complete.

2.7 Benefits of E-Government

Knight (1996) asserts that countries that fail to embrace the E-government revolution are bound to become marginalized. The adoption of E-government has brought about benefits such as lowering the cost of storing, processing, and transmitting information by governments to citizens. The incorporation of IT in the government is evident from the number of devices found in the government offices ranging from computers, laptops, servers, mobile phones, satellite communication, electronic organizers and Internet connectivity. The government's pursuit of new technology has brought about a prolific impact and has transformed people's ability to acquire, store, use and disseminate information. Information may be numeric, textual, pictorial or sound form and can be applied in a wide range (Cole 2000). In addition, E-government can further development goals in many ways such as enabling long-distance education, tele-medicine, environmental management, strengthening participatory approaches and creation of new livelihoods.

E-government technology can enable service delivery to remote areas. For instance, the renewal of licenses and registration of a new business. The technology can also allow access to information by citizens especially women, youth and socially disadvantaged groups (Miles, 1994).

In theory, everything that is done by E-government can be done by other means. In practice, the ability of E-government to increase the speed and reduce the cost of dissemination of information means that ICT can help do things that would not otherwise be contemplated. To sum up, E-government has three basic change potentials within the context of governance.

2.7.1 Support

E-government can assist with tasks and processes that involve complex decision making, communication and decision implementation. For example, in Ireland, the Department of Social Welfare created more than a dozen computerized applications in order to support the decentralization of responsibilities from Dublin to outlying offices (Heek 1999).

2.7.2 Supplant

ICTs can automate tedious tasks done by humans which involve accepting, storing, processing, outputting or transmitting information. For instance, special software packages can sort incoming e-mail messages by sender, subject matter, or recipient. Mailboxes can automatically respond to simple e-mail requests. Survey systems can send forms to citizens or other recipients, process their responses and format the results without the need for human oversight or intervention (Heek 1999).

2.7.3 Innovate

ICTs can support new tasks and processes. For example, computer-based civic networks enable people of diverse backgrounds to communicate on subjects of mutual interest. This diversity, both social and geographic, allows for individuals and groups to communicate amongst themselves in ways that are largely impossible without electronic communications. As a result of these changes, policymakers can expect efficiency at a lower cost. In Sweden, the Web and other Internet-enabled applications are used to increase the democratization of local government in Göteborg. At a very low cost, the government is able to create a significantly more participatory democracy. In the US, the Lawrence Livermore National Laboratory uses a Web-based system to

increase the speed procurement process (Institute on Governance, 1996). In Spain and Portugal, smart cards are issued to people to claim unemployment benefits at kiosks and to check on job vacancies and training opportunities. In the US, collusion detection software was developed and applied to root out impropriety in bids and contracts awards for supply of school milk (Heek, 1999).

2.8 Global Success Stories of E-government

Successful implementation of E-government technology has brought about rapid transformation of a knowledge-emergent society in countries that have adopted it. Canada has embraced and implemented E-government by adopting a citizen's perspective into its service delivery program through informing and educating its citizens on its service offerings. The federal government has set aside funds to ensure web services are available to all its citizens with ease and at an affordable rate (Robinson, 2005).

The Chile government portal website has a procurement system that allows storage, distribution and analysis of information as well as generation of bidding. E-government services ensure that there is transparency, efficiency and fairness in procurement. It is estimated that, Chile government saves a total of $200m a year through the use of the procurement system (Magana, 2004).

The electronic customs clearance system aids the Philippine government to process clearance of imports, payment of duty, and delivery of release orders for shipment. Before the system was developed, the customs bureau rated as one of the most bureaucratic and corrupt sectors with the process involving nearly ten separate documents in multiple copies, over ninety steps and more than forty signatures. Cargo is released within four hours to two days instead of the earlier eight days and payment reconciliation can be done the same day down from four months (Magana, 2004).

In Ireland, the government has developed an online system where one can renew their motor tax and driving licenses. This has made the lives of the citizens easier and more convenient (McGovern, 2005).

The environment for ICT access has improved relatively rapidly in most urban areas in Africa. This rapid spread of communication technology present a variety of services that can be accessed at the click of a button. For instance, ICT applications have enabled countries like South Africa

make gigantic improvements in both productivity and services such as finance, trade, distribution, marketing, education and health (Kagwe, 2006). The South African government has placed a strong emphasis on ICT sector development through the implementation of a National ICT strategy. This plan proactively addresses ICT penetration in the government offices and to all its citizens, particularly for disadvantaged people of the society. The government has implemented a framework for policies, infrastructure, partnerships and task forces that will help South African citizens play a role in the global economy and act as a key enabler to achieve development goals.

In Kenya, the computerization of all government departments spearheaded by the Ministry of Information and Communication has brought a lot of improvement in the way the services are being relayed to the citizens. For instance, the automation of the Company's Registry in the Attorney General's Office has resulted in the registration of documents of incorporation for businesses cut from an average of two weeks to just three days. Moreover, vital records can now be kept in a more secure manner and made available to entities like banks that might want to establish the credit worthiness of a business. Finally, the automation of ministries and other government departments aims at transforming Kenya into a technological centre (Nation team, 2006).

2.9 Chapter Summary
Successful implementation of E-government technology increases efficiency in government and reduces pilferage and misappropriation of funds. Despite these benefits, there are still a variety of issues that hinder the use of government to citizen (G2C) such as lack of ICT skills, poorly designed websites, inadequate power supply, user attitudes, security and authentication concerns.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology that was used in the study. The main sections in this chapter include research design, population of study, sampling techniques, data collection methods, data analysis and presentation.

3.2 Research Design

The study involved a survey of students and staff of the School of Business, University of Nairobi. According to Kotler and Armstrong (2001) this design is best suited for gathering descriptive information. The study collected data and information on key factors that hinder the use of E-government.

3.3 Target Population

The population of the study consisted of students and staff of the School of Business, University of Nairobi. The University is the largest institution of higher learning in Kenya. It was selected because of easy accessibility and the fact that the university community constitutes citizens who seek government services regularly. The study focused on the module II students enrolled in Bachelors of Commerce and Master of Business Administration in the main campus of the university. It also focused on both academic and support/administrative staff who offer their services to module II students.

3.4 Sampling Techniques

A sample of 200 respondents was selected from the target population through the use of stratified, judgmental and simple random sampling techniques. Stratification was used to classify the study population into different categories. The School of Business was broadly stratified into staff and students. Further stratification resulted into four categories name academic staff, support/administrative staff, graduate and undergraduate students. Judgmental technique was used to select module II students from the School of Business because this was a group of part time students most of whom were working in various firms within Nairobi and its environs and it was a group of students who have been exposed to ICT.

Simple random sampling was further used to administer the questionnaires as it gave respondents an equal probability of being chosen to fill in the questionnaire. This eliminated biasness.

According to Gay (1992), a researcher selects a sample due to various limitations that may not allow researching the whole population. He recommends that a representative sample of the whole population be studied. Table 3.1 shows the sample sizes of the target population.

Table 3.1- Target Population

Broad	Specific	Number	Sample Size
Staff	Academic	60	30
	Support/ Administrative staff	55	50
Students (Module II)	Graduate (MBA)	1150	60
	Undergraduate(BCom)	1350	60
	Total		200

Source: Research Data

3.5 Data Collection Method

The study used both primary and secondary data. Primary data was collected through the use of self-administered questionnaires **(appendix II)**. The questionnaire consisted of three sections. Part A sought demographic characteristics of the respondents while part B and C addressed possible factors that hinder E-government use. The questionnaire contained both open-ended and closed-ended questions. The open-ended questions allowed free responses from the respondents, without providing or suggesting any structure for the response. The closed ended questions enabled responses of the respondents to be limited to stated alternatives.

3.6 Data Analysis

All filled questionnaires were checked for completeness and accuracy and coded. The data was analyzed through the use of descriptive statistics. Factor analysis was used to identify and isolate factors that hinder the use of G2C. In addition, cross tabulation was used to compare across different dimensions of factors being studied. The Statistical Package for Social Sciences (SPSS) was used to perform the analysis.

CHAPTER FOUR
DATA ANALYSIS

4.1 Introduction

This chapter covers data analysis using factor analysis and cross tabulation. Data was collected from questionnaires which had been dispatched. Out of the 200 questionnaires, 152 (76%) responses were received, coded and analyzed. This chapter presents the results of the analysis of data.

4.2 Demographic characteristics

Out of the 152 respondents, 35.53% were staff while 64.5% were students. 69.7% of total respondents were male while 30.3% were female. Only 1.3% of total respondents were below 20 years. 39.5% respondents were in the age bracket of between 21-30 years. The statistics of those who responded are summarized in Table 4.1.

Table 4.1 – Demographic characteristics

	Frequency	Percentage of total respondents (%)
Category		
Academic Staff	19	12.5
Support/Administrative staff	35	23.03
Undergraduate	55	36.2
Postgraduate	43	28.3
Gender		
Male	106	69.7
Female	46	30.3
Age Bracket		
Below 20 years	2	1.3
21-30 years	60	39.5
31-40 years	34	22.3
41-50 years	23	15.1
51-60 years	19	12.5
Above 60 years	54	9.3

Source: Research data

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4.3 Extent of Usage of E-government

Use of Internet

Findings showed that 82.2% of the respondents indicated they do browse the Internet in various places like at home, in the computer laboratories at the university, in their offices, in the cybercafés. 61% of the respondents who browse the Internet do so in the university computer labs, 28% indicated that they browse in their offices at work, 6% in the cybercafés, 2% at home and 3% in other places like using a computer of a friend or relative. The results are indicated in the Table 4.2 below.

Table 4.2- Internet Access Preference

Place	Frequency	Percent
Own computer at home	3	2
In the computer laboratories	76	61
In the office	35	28
In a cybercafé	7	6
Others (friends, relatives)	4	3
Total	125	100

Source: Research data

Browsing a Kenyan Government based organization website

49 out of 125 (39.2%) respondents who browse the Internet indicated that they had browsed a Kenyan government based organization website. 76 (60.8%), indicated that, they have never browsed a Kenyan government based organization website.

Services being sought in Kenyan government based organization website

Findings showed that most sought service was email with 61.22% while paying for services was the least sought service with 2.04%. The results are clearly shown in the Table 4.3 below.

Table 4.3 -Services sought while browsing

Service	Frequency	Percent
Seeking general information	6	12.24
Downloading or filling a form	12	24.49
Paying of services	1	2.04
E-mail services	30	61.22
Total	49	100

Source: Research data

Media used by government to cause awareness

The study sought to establish how the respondents learnt about the Kenya government based websites. Most respondents (62.27%) who browse the Internet indicated that they learnt about the websites through newspapers, while only 6.12% of the respondents learnt through word of mouth.

Table 4.4 – Mode of advertisement

Mode of learning	Frequency	Percent
Newspaper	31	62.27
Word of mouth	3	6.12
TV/Radio	9	18.37
Others	6	12.24
Total	49	100

Source: Research data

Website features sought by Internet users

Respondents were asked to indicate what factors were important to them while browsing these government based websites. Among the responses given included the speed of connectivity, ability to browse two or more websites at the same time, affordable cost of browsing, conducive environment and up to date website information.

Areas that need improvement

Respondents were asked to indicate areas that these government based websites could improve on. Among the responses given included need to reduce the cost of browsing, increase the number of cyber cafes to reduce congestions, improve the design of the Kenya based websites, improve on security and privacy, improve on user awareness campaign and initiate online help facilities.

Occupation versus cost factor

In order to investigate whether there is any correlation between the occupation and the cost factor hindering the use of Government to Citizen (G2C), chi square test of association was performed. Chi square is a statistic used to test the hypothesis of association between two variables in this case, occupation and cost factor. The summary of the analysis is as shown in Table 4.5 and Table 4.6.

Table 4.5 - Occupation versus cost factor

	Academic Staff	Administrative/Support Staff	Undergraduates	Post graduates	Total
1-Strongly disagree	2	2	5	3	12
2-Somewhat disagree	10	3	7	7	27
3-Neither agree/disagree	4	5	8	3	20
4-Somewhat agree	1	15	10	10	36
5-Strongly agree	2	10	25	20	57
Total	19	35	55	43	152

Source: Research data

Table 4.6 - Chi square test of occupation versus cost factor

	Value	df
Pearson Chi square	42.48	12
No. of Valid cases	152	

The Pearson's chi square value of 42.48 with 12 degrees of freedom has a critical value of 21.0 at a chosen probability of error threshold of $p<0.05$. The chi square value is greater than the critical value so the data presents statistically significant relationship between the occupation and the cost of Internet access.

Table 4.7 – Social class and unavailability of Internet access factor

	Lower	Middle	Upper	Total
1-Strongly disagree	3	2	22	27
2-Somewhat disagree	2	3	14	19
3-Neither agree/disagree	1	2	5	8
4-Somewhat agree	9	29	8	46
5-Strongly agree	10	35	7	52
Total	25	71	56	152

Source: Research data

Table 4.8- Chi square test of social class and unavailability of Internet Access points factor

	Value	df
Pearson Chi square	57.932	8
No. of Valid cases	152	

The Pearson's chi square value of 57.932 with 8 degrees of freedom has a critical value of 15.5 at a chosen probability of error threshold of $p < 0.05$. The chi square value is greater than the critical value so the data presents statistically significant relationship between the social class and the cost of Internet access points.

Table 4.9 -Gender and luck of awareness of existence of websites

	Male	Female	Total
1-Strongly disagree	40	2	42
2-Somewhat disagree	30	8	38
3-Neither agree/disagree	20	11	31
4- Somewhat agree	8	15	23
5- Strongly agree	8	10	18
Total	106	46	152

Source: Research data

Table 4.10 – Chi square test of gender and lack of awareness factor

	Value	df
Pearson Chi square	33.1654	4
No. of Valid cases	152	

The Pearson's chi square value of 33.1654 with 4 degrees of freedom has a critical value of 9.49 at a chosen probability of error threshold of $p < 0.05$. The chi square value is greater than the critical value so the data presents statistically significant relationship between the gender and lack of awareness of the existence of the websites factor.

4.4 Factors hindering use of E-government - Factor Analysis

Data collected was subjected to factor analysis. Factor analysis is a technique used to identify major factors considered to be important by consumers of a service or product. It seeks to reduce a large set of measured variables to relatively few categories (Boyd, 2002). Factor analysis was used to group twenty one factors hindering E-government to four factors. The four factors were extracted using varimax rotation.

Total Variance Explained

Table 4.11 shows the variance of the 21 variables, the percentage of variance attributable to each factor and the cumulative variance of all factors. Principal component analysis was used and it extracted 4 orthogonal (independent) principle factors. These are the factors with eigenvalues (measure of variance) greater than 1.

The first factor accounts for 50.212% of the variance, the second factor explains 11.185% of the total variation, and the third factor explains 7.728% of the total variation while the fourth factor explains 6.567% of the variance. The accumulated percentage variance is 75.693% of the dimensions of factors hindering E-government that have been studied.

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Table 4.11 - Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	%age of variance	Cumulative %
1	8.536	50.2	50.212	8.536	50.212	50.212	5.141	30.239	30.239
2	1.901	12	61.397	1.901	11.185	61.397	3.941	23.180	53.419
3	1.314	11.185	69.125	1.314	7.728	69.125	1.932	11.364	64.783
4	1.116	7.728	75.693	1.116	6.567	75.693	1.855	10.910	75.693
5	0.728	6.567	79.977						
6	0.642	4.284	83.754						
7	0.615	3.778	87.371						
8	0.514	3.617	90.397						
9	0.438	3.025	92.975						
10	0.315	2.579	94.828						
11	0.229	1.853	96.172						
12	0.212	1.344	97.419						
13	0.154	1.247	98.323						
14	0.117	.903	99.010						
15	.349E-02	.688	99.207						
16	.354E-0.2	.197	99.401						
17	.386E-0.2	.194	99.562						
18	.376E-0.2	.161	99.720						
19		.158	99.854						
20		.134	100.000						
21		.142							

Rotated component matrix explained

The initial component matrix was rotated using Varimax (Variance Maximization) with Kaiser Normalization and gave the component transformation matrix on Table 4.12. This matrix shows the loadings of the 21 variables on the four factors extracted. The higher the absolute value of the loading the more that factor contributes to the variable. These results aid in identification of variables that fall under each of the extracted factors. The gaps on the table represent loadings that are less than 0.5. This omission ensures easier readability.

Table 4.12 -Rotated component matrix.

Factors	1	2	3	4
- Lack of skills and knowledge to access the websites.	0.826			
- Slow speed of connection.	0.787			
- Lack of face to face interaction when using E-government.	0.673			
- Limited number and types of available services in the website.	0.664	0.586		
- Reluctance to change by users to use online services.	0.647			
- Unavailability of internet access points.	0.625			
- Poor design of websites.	0.622			
- Lack of up-to-date information.	0.620			
- Unreliable internet connection.	0.522			
- Ensuring desired levels of security.	0.522	0.875		
- Lack of online help facilities.		0.729		
- Lack of awareness of existence websites.	0.584	0.729		
- Lack of ways to authenticate documents and information (need for signatures).				
- Frequent power interruptions.		0.661	0.833	
- Cost of acquiring online services.	0.508	0.630	0.616	
- Lack of immediate feedback.	0.463	0.732		0.899
- Ensuring desired levels of privacy.	0.382			
- Lack of electronic payment system.	0.458			

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- Sites being down most of the times.	0.402			
- Culture of paper based documents.	0.381			
- Level of computer literacy.	0.229			

Extraction method: Principal Component Analysis.

Rotation method: Varimax with Kaiser Normalization.

Rotation converged in 20 iterations.

Isolation of factors

Isolation of factors involves isolating each factor based on the factors loading. These are the correlation between the factors and the factors encountered.

Factor 1

Variable 1: Lack of skills and knowledge to access websites

Variable 2: Slow speed of connection.

Variable 3: Lack of face to face interaction when using E-government.

Variable 4: Limited number and types of available services in the website

Variable 5: Reluctance to change by users to use online services.

Variable 6: Unavailability of internet access points

Variable 7: Poor design of websites.

Variable 8: Lack of up-to-date information.

Variable 18: Lack of electronic payment system

Variable 19: Sites being down most of the time

Variable 20: Culture of paper based documents

Variable 21: Level of computer Literacy

Factor 2

Variable 9: Unreliable internet connection.

Variable 10: Ensuring desired levels of security.

Variable 11: Lack of online help facilities.

Variable 12: Lack of awareness of existence of websites

Variable 13: Lack of ways to authenticate documents

Variable 15: Cost of acquiring online services

Variable 17: Ensuring desired levels of privacy.

Factor 3

Variable 14: Frequent power interruptions.

Factor 4

Variable 16: Lack of immediate feedback

Factor one addresses issues relating to inadequate online services and user attitudes. The second factor addresses matters relating to accessibility and security. The variable under factor three may be addressed through inadequate power supply while the variable under factor four point to lack of immediate feedback

CHAPTER 5
CONCLUSIONS

5.1 Introduction
This chapter presents the summary, discussions and conclusions for the research findings in line with the objective of the study. In addition, suggestions for further research and the limitations of the study are also given.

5.2 Summary, Discussions and Conclusions
The objective of the study was to establish the factors that are hindering the use of E-government by citizens. Factor analysis reduced the twenty one variables to four key factors which are discussed below.

Inadequate online service is a key factor that hinders the use of E-government. Respondents indicated that services such as up to date information, electronic payment system, dependable websites and adequate Internet access points were lacking and this was a great hindrance to the use of E-government by citizens. In addition, traditional user attitudes such as reluctance to change and culture of paper based documents have to a great extent contributed to the low usage of E-government. This factor contributed to the highest variation of 50.21% and was the most important key factor contributing to the low usage of E-government. Therefore, as the Kenyan government extends its E-government initiatives to its citizens, it is critical that it focuses its resources towards increasing and improving its online services and educating users. One of the ways to implement this would be the creation of transactional websites.

The second key factor points towards accessibility and security which contributed to 11.19% variation. Unreliable Internet connection and the cost of acquiring online services contributed largely to inaccessibility. Lack of online help facilities, awareness of existence of websites, methods of authentication and privacy are aspects that pointed towards security. These findings indicate that users have security concerns and are wary of submitting personal details over the Internet. Most citizens consider the Internet as not secure for public services. The fact that in cyberspace the identity is entirely electronic brings the danger of identity theft. People need to know whom they are communicating with especially in cases where personal information is needed.

As the government rolls out a national ICT sector policy and E-government strategy, it should initiate efforts to make services efficient, affordable and secure to enhance service provision to all. The government should develop an identity management system. Identity is a key issue, as proof of citizen identity is a requisite for any E-government service. A standard authentication system that is acceptable to citizens should be set up in order to encourage use of E-government services.

If E-government is to benefit all Kenyans then there is need to lay the framework for access to these services to all parts of the country. Frequent power interruptions hinder users from accessing these services. Areas, especially rural regions where there is no electricity, are bound to have difficulties in accessing these services. The government should facilitate power lines to rural areas.

Lack of immediate feedback is also a factor hindering E-government usage. Time is an important concern especially dealing with the government. For a long time, citizens have had the perception that the government has been slow in its service delivery. With the introduction of online facilities, citizens would expect delivery of services to be much faster. Lack of immediate feedback is a crucial factor that could easily hinder the user from using E-government.

Findings from the demographic data collected and analyzed suggested that the increase of internet access points could largely improve accessibility of E-government. It was found out that 82.2% of the respondents sought Internet from the cyber cafés.

Further, only a low percentage (39.2%) of the respondents was aware of the existence of government based websites. This shows that the government must embark on an awareness campaign to educate and let the citizens know about the online services it offers. This will greatly increase the usage of E-government. Efficient use of E-government will ensure use of less paper thus a short time is taken to sort out issues leading to cutting down costs on service delivery.

5.3 Limitations of the study

There are a number of limitations that may have affected the results of this study including the following.

The 'drop and pick later' method of issuing questionnaires was challenging as it proved difficult to reach the respondents in good time. Time was also a limiting factor as it was not possible to collect data from all respondents and carry out more advanced data analysis techniques. This reduced the response rate to 76%.

The study focused on the University of Nairobi and therefore it did not cover other regions of the country. The perception of E-government could be different in other parts of the country especially in the rural areas.

5.4 Suggestions for further research

This study has highlighted factors hindering the use of E-government (G2C). However, more in-depth studies could be carried out in the area of use of E-government and user composition of E-government.

Other studies could focus in the areas of nature of information required by users in the government based websites, realistic expectations about the use of E-government, the perceived importance of the use of E-government and risks of using E-government.

5.5 Recommendation for policy and practice

From the findings and conclusions of the study, various factors were identified that hinder use of E-government. In order to reap the benefits of E-government as seen in the literature review, the Kenyan government should identify and minimize these factors so as to realize its efforts in providing online services to citizens.

The government's initiative to provide online information is a commendable one but more should be done to ensure that this online information is accessed by the intended user. The government should ensure speedy, secure and efficient delivery of online services to its citizens.

Efforts should be made to construct transactional websites that allow services like online payments of services. This will allow those who can access the services to avoid long queues and

enable one to do business online. In addition, a training program should be initiated to educate the civil servants and the wider public on the benefits of E-government.

In conclusion, in view of the study done, an implementation roadmap that addresses user concerns would go a long way in reducing the limiting factors and lead to successful realization of E-government. This will in turn spur development of the entire economy of the country by leading to creation of new ways of citizens interacting with the government.

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APPENDIX I: QUESTIONNAIRE COVER LETTER

September 1st 2006

Department of Management Science,

School of Business,

University of Nairobi,

P. O Box 30197,

Nairobi.

Dear Respondent,

RE: QUESTIONNAIRRE

I am a student pursuing a course in Master of Business Administration (MBA) specializing in Management Information Systems. In partial fulfillment of the course requirements, I am conducting a survey on the **factors hindering the use of E-government: A case of School of Business, University of Nairobi.**

The information given will not be used for any other purpose other than for this research and your answers will be treated with all the confidentiality deserved. I will be happy to share the results of my research with you upon request.

Your cooperation is highly valued and appreciated.

Thank you in advance.

Yours Faithfully,

Nderitu Esther.
D61/P/7551/02

APPENDIX II: QUESTIONNAIRE

PART A – DEMOGRAPHIC DATA

1. What is your name? (Optional) ....

2. Where do you live (Estate) ....

3. Which of the following best describes your role in the University?

Academic staff	[ ]
Support/Administrative staff	[ ]
Undergraduate student	[ ]
Postgraduate student	[ ]
Other, please specify	---

4. What is your gender?   Male [   ]   Female   [   ]

5. Please tick the age bracket in which you fall.

i)	Below 20 years	[ ]
ii)	21 – 30 years	[ ]
iii)	31 – 40 years	[ ]
iv)	41 – 50 years	[ ]
v)	51 – 60 years	[ ]
vi)	Above 60 years	[ ]

PART B

6. Do you browse the Internet?   Yes [   ]   No [   ]

7. If yes, please indicate the place where you browse.

My own computer at home	[ ]
In the university computer labs	[ ]
Office	[ ]
In a cyber cafe	[ ]
Others (friend, relative)	[ ]

8. a) Have you ever browsed a Kenyan government based organization website?

   Yes [   ]   No [   ]

   b) If yes, please indicate what services you were seeking

   Seeking general information   [   ]

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Downloading or filling a form   [   ]

Paying for services   [   ]

Email services   [   ]

Others please specify   ------------------------------

9. How did you learn about the website:

Newspaper   [   ]

Word of mouth   [   ]

TV/Radio   [   ]

Others please specify   ------------------------------

10. What did you like while browsing the website(s)?

i)   --

----

ii)   --

----

iii)   --

----

11. What needs to be improved in the website(s)?

i)   --

----

ii)   --

----

iii)   --

PART C

12. Rate the extent to which the following factors **hinder the use** of online services by government to citizens. (E-government)

Use a five-point measurement scale as follows:

Key: 1 = Strongly disagree;   2 = somewhat disagree; 3 = Neither agree nor disagree; 4 = Somewhat agree;   5 = Strongly agree

	1	2	3	4	5
1) Slow speed of connection	[ ]	[ ]	[ ]	[ ]	[ ]

2)	Unavailability of Internet access points	[ ]	[ ]	[ ]	[ ]	[ ]
3)	Cost of acquiring online services	[ ]	[ ]	[ ]	[ ]	[ ]
4)	Ensuring desired levels of security	[ ]	[ ]	[ ]	[ ]	[ ]
5)	Ensuring desired levels of privacy	[ ]	[ ]	[ ]	[ ]	[ ]
6)	Unreliable Internet connection	[ ]	[ ]	[ ]	[ ]	[ ]
7)	Reluctance to change by users to use online services	[ ]	[ ]	[ ]	[ ]	[ ]
8)	Frequent power interruptions	[ ]	[ ]	[ ]	[ ]	[ ]
9)	Lack of awareness of existence of websites	[ ]	[ ]	[ ]	[ ]	[ ]
10)	Lack of skills and knowledge to access the Websites	[ ]	[ ]	[ ]	[ ]	[ ]
11)	Lack of face to face interaction when using E-government.	[ ]	[ ]	[ ]	[ ]	[ ]
12)	Limited number and types of available services in the website	[ ]	[ ]	[ ]	[ ]	[ ]
13)	Lack of online help facilities	[ ]	[ ]	[ ]	[ ]	[ ]
14)	Lack of ways to authenticate documents and information (need for signatures)	[ ]	[ ]	[ ]	[ ]	[ ]
15)	Lack of immediate feedback	[ ]	[ ]	[ ]	[ ]	[ ]
16)	Lack of up-to-date information	[ ]	[ ]	[ ]	[ ]	[ ]
17)	Poor design of websites	[ ]	[ ]	[ ]	[ ]	[ ]
18)	Sites being down most of the times	[ ]	[ ]	[ ]	[ ]	[ ]
19)	Level of computer literacy	[ ]	[ ]	[ ]	[ ]	[ ]
20)	Culture of paper based documents	[ ]	[ ]	[ ]	[ ]	[ ]
21)	Lack of electronic payment system	[ ]	[ ]	[ ]	[ ]	[ ]

13. Please indicate any other factor that may hinder the use of E-government.

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14. Please give any other comment that you may deem useful for this exercise.

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Thank you very much for your cooperation