
E-governance and Its Contribution to Fostering Good Governance:

A Case Study of E-Governance in Five African Countries.

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DECLARATION

I, Zuena Anjela Onyango, declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. It is being submitted for the degree of Master of Social Science (Policy and Development Studies) in the Faculty of Humanities, Development and Social Sciences, University of KwaZulu-Natal, Pietermaritzburg, South Africa. None of the present work has been submitted previously for any degree or examination in any other University.

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All the Glory and Honour be to God for His faithfulness.

ABSTRACT

This research sets out to ascertain the application of e-governance in five selected African countries, (namely South Africa, Kenya, Tanzania, Rwanda and Ethiopia) and whether it has the potential to contribute to good governance. In the 21st century, globalisation has changed the way countries relate politically, socially, and economically in the global arena. This has been driven by many factors, but the most notable being technological advancements. According to the 2003 World Public Sector Report, the advancement in Information Communications Technologies (ICTs) has presented new opportunities to integrate networking to improve the efficiency of how business is carried out and how services are provided.

The use of ICTs such as computers, electronic databases and other technologies have been in use for a number of years within the public sector to organise, manage and disseminate information to the public as well as to facilitate day-to-day communication in government offices. In this context, the value of the use of ICTs has been to assist and streamline government operations.

Alongside the growing application of ICTs in government operations, good governance is more and more regarded as the ideal manner in which to govern and provide public services. Grindle¹ points out that good governance is about the state's capacity to be able to design and implement appropriate public policies that in a way ensures equitable administering of resources with values such as accountability, transparency, efficiency, effectiveness, representativeness, public participation and responsiveness.

This study makes a comparison between the developing countries of South Africa, Kenya, Tanzania, Rwanda and Ethiopia in order to determine the extent to which they are adopting e-governance practices as well as ascertaining whether these contribute to the good governance mandate.

¹ Grindle, M.S. 1997. *Getting Good Government: Capacity Building in the Public Sectors of Developing Countries*. Harvard University Press: Harvard Institute for International Development. p.5.

Findings from the study reveal that although e-governance has been promoted as an initiative to improve public service delivery, it is not an end but rather a possible means to an end to improve service delivery. This is attributed to the fact that there are still some hindrances to the implementation and application of e-governance in the five countries discussed. Such include the widespread prevalence of digital divides. Despite this, the overall implication for the use of ICTs in governance can be of some benefit in enhancing the requirements of good governance. With the rapid advancement of ICTs and continuous nascent nature of e-governance, the progress the countries discussed have made shows that the implementation and application of e-governance is and will be a continuous process. As a result, the state of e-governance may therefore improve.

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Chapter One: Introduction

1.1 Background to the study

Over the past decade, technology has advanced and spread widely across the globe.¹ The increasing impact of this technology is evident in, and defines almost every aspect of, day-to-day activities in most countries. Such developments have paved the way for innovation by governments that are well prepared to take advantage of them to better the livelihood of their people. Technological advancement has increased and improved the production and dissemination of information. As a result, in as much as information is produced, it becomes necessary to ensure that it is not only accessible but also useful to the target audience. The real value of information lies in its capacity to bring transformation, growth and development.²

A number of countries are venturing into initiatives to use Information and Communication Technologies (ICTs) not only to promote government, but also to carry out the act of governing.³ This means exploring the potential that lies in ICTs to assist in the delivery of public services. As part of governance reform, this means introducing new forms and modes into governmental structures such as the use of technology in order to manage how they carry out their operations.⁴

In this chapter, the rationale for the study, the scope of the study, the aims and the research methodology used in the study are presented.

1.2 Rationale for the study

The 2003 World Bank Public Sector Report defined government as a public institution put in place by a society, often to pursue that particular society's goals. In essence, government has roles and responsibilities that its citizens expect to be served efficiently and effectively. Amongst its roles is to protect citizen rights, uphold the rule of law and order as well as provide public services.⁵

¹ Grindle, M. S. 2000. "Ready or Not: The Developing World and Globalization." In Nye, J.S. and Donahue, J.D. *Governance in a Globalizing World*. Brookings Institution Press: Washington, D.C. p.178.

² Ibid.

³ Ibid.

⁴ Ibid.

⁵ World Bank Public Sector Report 2003: *E-government at the Crossroads*. United Nations. p.1.

Many authors continue to argue that the problem of poor governance on the African continent is still prevalent. Mbaku and Saxena, for example, argue that in Africa most governments have been operating under authoritative regimes with authoritative leadership styles that maintain centralised and unchanged structures.⁶ As a result of central control over public resources, the ability of the public administration to monitor and distribute public resources for the common good of the majority is undermined. Mechanisms that promote accountability and responsibility are still inadequate.⁷ Poor governance on the continent has also been exacerbated by a lack of proper conflict management and resolution. A number of African countries, such as Ethiopia and Rwanda have faced years of civil war fuelled by struggles for political gain and resource distribution.⁸

Grindle defines governance as a state's capacity to be able to design and implement appropriate public policies that ensure the equitable administering of resources both transparently and efficiently.⁹ This implies that government, as a public service provider, has the capability to harness its resources (under a well-structured public service sector) and can both identify and meet the needs of its citizens. It is about making efficient use of resources to cater for the basic needs of the citizens.¹⁰ This is in line with the seven elements of good governance, which are: (i) accountability; (ii) transparency; (iii) efficiency; (iv) effectiveness; (v) representativeness; (vi) public participation; and (vii) responsiveness.¹¹

This study will explore these concepts and consider their relevance for e-governance. One of the assumptions that is made in this research report is that the implementation and application of e-governance can promote the principles of good governance.

⁶ Mbaku, J.M. and Saxena, S.C. 2004. (Eds.). *Africa at the Crossroads: Between Regionalism and Globalization*. Praeger: Westport. p.4.

⁷ Ibid.

⁸ Edigheji, O. "A Democratic Developmental State in Africa?" *Research Report* 105. Centre for Policy Studies. p.1.

⁹ Grindle, M.S. 1997. *Getting Good Government: Capacity Building in the Public Sectors of Developing Countries*. Harvard University Press: Harvard Institute for International Development. p.5.

¹⁰ Akokpari, J. 2003. "The OAU, AU, NEPAD and the Promotion of Good Governance in Africa." *EISA Occasional Paper Number 14*. p.1.

¹¹ Abdellatif, A. M. 2003. "Good Governance and Its Relationship to Democracy and Economic Development." Seoul, 20-31 May. p.5.

1.3 The Scope and Aims of the study

As stated earlier, the main focus of this research is on e-governance. While this is a broad and all encompassing field, this particular study will focus on five developing countries on the African continent, namely: South Africa, Kenya, Tanzania, Rwanda and Ethiopia. The selection of these countries was random to give a comparative edge to the research based on each country's political background. This study is a descriptive analysis of e-governance in these five countries and is meant to be illustrative rather than comprehensive. Many African countries share a political background of colonialism but now exhibit different socio-economic and political characteristics, yet all have pursued some form of e-governance. This study aims to compare these five countries' state of e-governance by examining the type of online services each government offers in order to determine whether it is conducive to promoting the principle of good governance.

In this respect, the aims of the study are:

- To critically analyse the relationship between good governance and e-governance.
- To explore the extent to which South Africa, Kenya, Tanzania, Rwanda and Ethiopia have implemented aspects of e-governance.
- To identify and consider limitations for implementing e-governance, such as the prevalence of the digital divide in each of the respective countries.
- To consider whether current e-governance measures applied by each of the respective countries can be conducive to good governance.

1.4 Research Methodology

This study is a qualitative comparative report of secondary literature on e-governance as well as an empirical assessment of the respective countries' online government portal.¹²

¹² Babbie, E. and Mouton, J. 2001. *The Practice of Social Science Research*. South African Edition. Oxford University Press Southern Africa: Cape Town. p.166.

The research methods adopted comprised of a literature review of texts on e-government and e-governance in developing countries. It also explored the literature on good governance. Besides a literature review, a case study was also undertaken in order to investigate the prevalence of the defining characteristics of e-governance and good governance in each of the five countries. The only common denominator is that each of these five countries are on the African continent, share a historical background of ethnic conflict or violence and are currently classified as developing countries.

The research design of the case study is exploratory and descriptive. General studies on the state of ICTs in the respective countries were consulted. In addition, the case study findings were based on the researcher searching for each country's official government websites and by assessing the government portals by identifying the type of information available, the functioning of intergovernmental links and the types of public services provided online. A comparison was also made by looking at issues of user-friendliness, language, the frequency of website updates, as well as looking for online avenues for citizen-government interaction.

1.5 Objective and Structure of this Research Report

The objectives and requirements of this research report are to undertake three critical tasks. Firstly, the report must present a conceptual understanding of some of the key concepts. This is primarily done by examining the literature on e-governance and good governance. In addition, it sets up a conceptual framework that allows for more empirical research. The second task is to apply the conceptual framework of analysis to a particular focus area. Finally, the research report must aim to integrate the theoretical findings with those of the case study and reflect on the broader understanding of the topic at hand.

This report is divided into four chapters. The first chapter constitutes the introduction to the study and presents the background to the study. The chapter immediately following this introduction, Chapter Two, reviews selected literature on e-governance and considers the broader objective of achieving good governance. The chapter also offers a more critical review of the limitations of e-governance by exploring debates on the Digital Divide in developing countries. Chapter Three is the case study component of this research report. It looks at the implementation

and application of e-governance in five African countries, namely: South Africa, Kenya, Tanzania, Rwanda and Ethiopia.

This research report is then concluded by Chapter Four which presents the Findings and Analysis of the whole study and reflects on the relationship between e-governance and good governance based on the research findings emanating from the case study. As such, it aims to reconcile the arguments raised in the literature with the findings of the case study.

Chapter Two: Understanding E-Governance

2.1 Introduction

The processes of globalisation coupled with the advancement in Information Communication Technologies (ICTs) have been of significance to governments globally. The acquisition and use of ICTs by governments in the management of their administrative activities has grown over the years, bringing forth the term e-governance which has become widely adopted by governments worldwide.¹³

This chapter explores the emergence of e-governance against the background of globalisation and the rapid expansion of ICTs. It aims to explore some of the theoretical arguments that claim that e-governance can improve governance and public service delivery, and that e-governance can be conducive to good governance.

2.2 Background

The concept of globalisation refers to a process of fundamental change in the way countries relate politically, socially and economically in the global arena.¹⁴ The term explains the growing integration of states towards “a common goal of sameness, economically, politically, socially and culturally, mainly driven by factors such as technological advancement.”¹⁵ Ocampo and Martin define globalisation as “a gradual process of convergence between states over time that has led to homogenised patterns of their day-to-day interactions” in the spheres mentioned above.¹⁶ They suggest that it can also be considered as a unitary term that best explains the interdependent relationship that exists between states in the world system. This interconnected relationship has brought about a linkage evident in the current discourse of a global system where events happening in one part of the world affect another regardless of time and distance

¹³ Keohane, R.O. and Nye, J.S. 2000. “Globalization and Public Administration Reform.” In Nye, J. and Donahue, J. *Governance in a Globalising World*. Brookings Institution Press: Washington, D.C. p.1.

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Ocampo, J.A. and Martin, J. 2003. *Globalization and Development*. Stanford University Press: California. pp.2-3.

between them which is facilitated by advanced technological innovations, especially those related to ICTs.¹⁷

ICTs can be characterised as mediums as well as tools that make use of technology or telecommunications to mainly “produce, process, retrieve, present, organise and convey information”.¹⁸ Technological advancement together with the development and spread of the Internet has greatly revolutionised the information era leading to a global information explosion – “information transcending borders”.¹⁹

The 2003 World Bank Public Sector Report states that, of late, the advancement in ICTs in general has presented new opportunities to integrate or network, and to improve the efficiency of how business is carried out and how services are provided.²⁰ The revolution in ICTs has led to the production and distribution of a vast amount of information, “leading to an expanded global marketplace for goods, services and ideas.”²¹ Oliver and Sanders argue that the use of ICTs in the public sector (such as computers, electronic databases amongst other technologies) were initially utilised in order to organise, manage and facilitate day-to-day communication in government offices.²²

Since its invention in 1969, the Internet has gained more popularity and reached a larger number of people compared to the telephone which upon its invention took 75 years to reach 50 million users.²³ The Internet can be defined as a worldwide network of computers and people.²⁴ The Internet was an invention to provide and establish a controlled network for communication. Its main aim was to manage and organise information online to facilitate how this information could be accessed and used through computers. The use of the Internet in the public sphere by a

¹⁷ Ibid.

¹⁸ Pass, L. and Creech, H. 2008. *How Information Communication Technologies Can Support Education for Sustainable Development: Current Use and Trends*. Available at: http://www.iisd.org/pdf/2008/ict_education_sd_trends.pdf p.4.

¹⁹ Ibid.

²⁰ World Bank Public Sector Report 2003. *E-Government at the Crossroads*. United Nations. p.128.

²¹ Ibid.

²² Oliver, L.E. and Sanders, L. 2004. *E-government Reconsidered: Renewal of Governance for the Knowledge Age*. Saskatchewan Institute of Public Policy: Canada. p.89.

²³ UN Global E-Government Readiness Report 2005: *From E-government to E-inclusion*. Department of Economic and Social affairs, Division for Public Administration and Development Management. United Nations: New York. p.1.

²⁴ Benson, A.C. 2001. *The Complete Internet Companion for Librarians*. 2nd ed. Neal-Schuman: New York. p.23.

number of governments has largely been to disseminate information within government itself, but is now considered to be valuable for both government and how it interacts with citizens.²⁵

2.3 Conceptualising Government and Governance

The concepts government and governance are closely interlinked and often used interchangeably. The World Bank Public Sector Report (2003) states that government is a formal public institution put in place by a society often to pursue that particular society's goals. It highlights that a government has roles and responsibilities regarding its citizens, and is expected to serve citizens efficiently and effectively. In a democracy, for example, amongst its roles is to protect the rights of citizens, and uphold the rule of law and order in addition to providing public services.²⁶

Grindle defines governance as "a state's capacity to be able to design and implement appropriate public policies that in a way ensures equitable administering of resources both transparently and efficiently."²⁷ This implies that a government as a public service provider has the capability to harness its resources and under a well structured public service sector can both identify and meet the needs of its citizens. She argues that governance also entails a true representation of the people to allow growth and development towards the social welfare and economic claims of the citizens.²⁸ Abdellatif gives a more general definition of governance as "the exercise of economic, political and administrative authority to manage a country's affairs at all levels."²⁹

2.4 Good Governance

Good governance is about making good, equitable, efficient, and effective use of resources to cater for the basic needs of the citizens.³⁰ It is premised on the exercise of "good, equitable, efficient, and effective power in managing a country's social and economic resources towards

²⁵ Behrens, S.J. 2000. *Bibliograph Control and Information Sources*. 3rd Edition. UNISA: Pretoria. p.24.

²⁶ World Bank Public Sector Report 2003: *E-government at the Crossroads*. United Nations. p.1.

²⁷ Grindle, M.S. 1997. *Getting Good Government: Capacity Building in the Public Sectors of Developing Countries*. Harvard University Press: Harvard Institute for International Development. p.5.

²⁸ Ibid.

²⁹ Abdellatif, A. M. 2003. "Good Governance and Its Relationship to Democracy and Economic Development. Global Forum III on Fighting Corruption and Safeguarding Integrity." Seoul, 20-31 May. p.4.

³⁰ Akokpari, J. 2003. "The OAU, AU, NEPAD and the Promotion of Good Governance in Africa." EISA Occasional Paper Number 14. p.1.

development initiatives.”³¹ The literature on good governance tends to identify a number of characteristics which are regarded as necessary prerequisites for good governance in democracies. Abdellatif identifies seven characteristics: (i) participation; (ii) representativeness; (iii) responsiveness; (iv) accountability; (v) transparency; (vi) efficiency; and (vii) effectiveness.³² These seven characteristics will be analysed in the case studies presented in this research report in order to consider the extent to which they are evident in the e-governance practices of each of the selected countries.

The first element, public participation, entails bringing decision-making closer to the people. The argument is that in as much as citizens are allowed to vote and enhance accountability through the vote, it is of equal importance to give citizens additional opportunities to make their voices heard. With regards to public service delivery, public participation is meant to promote active participation and direct engagement in public decision-making processes that influence the quality of services delivered. The citizen is empowered to move away from just receiving passive information to the active use and participation in the collection of information.³³

The second element of good governance is representativeness. According to Sachdeva, public representation is based upon publicly elected government officials acting (directly or indirectly) as a link between them and the government in its programmes, policies, law and regulations and budgets.³⁴ This is to ensure equity in government through election to understand diversity and thus enable the airing of grievances. Those elected as representatives need to have the ability to mediate or promote dialogue on conflicting interests of the public. Their voice necessitates initiatives that include citizens and enable their interests to be represented collectively through forums.³⁵

Thirdly, good governance entails responsiveness. This is about government, as an elected institution, being able to serve all in an accountable and responsible manner. It involves a more

³¹ Abdellatif, A. M. 2003. “Good Governance and Its Relationship to Democracy and Economic Development. Global Forum III on Fighting Corruption and Safeguarding Integrity.” Seoul, 20-31 May. p.5.

³² Ibid.

³³ Ibid., p.7.

³⁴ Sachdeva, S. (No date) *Twenty Five Steps to Successful E-Governance*. Available at: http://ict.developmentgateway.org/uploads/media/ict/25stepstoegov_paper_1.pdf p. 27.

³⁵ Ibid., p. 27.

active and responsive bureaucracy that aims to meet the demands of the people and to act accordingly. In other words, the government officials need to be capable to react to public needs with speed and accuracy through systematic approaches or recognised mechanisms as means to address social issues.³⁶

The fourth element of good governance is accountability. Government as decision-makers must be made accountable to the public they serve. Hereby, the government has a responsibility to uphold its rules as well as other institutional stakeholders. Accountability is an indication of how well the public can hold the government and civil servants answerable for the way in which they discharge their responsibilities.³⁷ According to Ehsan and Naz, the main aim of promoting accountability is to minimise the abuse of power. This means assigning responsibilities to government officials, ensuring assessments of their performance to reinforce compliance and obliging those tasked with delivery, to being answerable for the discharge of their responsibilities.³⁸

Transparency is a fifth element of good governance. Transparency is enhanced when citizens have greater access to information. It tasks government with the responsibility to collect, analyse, organise and manage public information and make it accessible to the public.³⁹ When the public has access to information it can be actively involved in informed participation with regards to decision-making in issues of governance. As such, it provides checks against mismanagement, corruption and promotes public participation and accountability.⁴⁰

The sixth element of good governance is efficiency. Abdellatif suggests that efficiency is the ability of those in government to produce results that meet the needs of its citizens without being wasteful in its utilisation of resources. In other words, it means enhancing value for money by

³⁶ Clift, S. L. 2004. "E-government and Democracy: Representation and Citizen Engagement in the Information Age." Research Article. Public Version 1.0. p.7.

³⁷ Sachdeva, S. (No date) *Twenty Five Steps to Successful E-Governance*. Available at: http://ict.developmentgateway.org/uploads/media/ict/25stepstoegov_paper_1.pdf p.28.

³⁸ Ehsan, M. and Naz, F. 2003. 'Origin, Ideas, and Practice of New Public Management: Lessons for Developing Countries'. *Asian Affairs*.25 (3): 30-48. pp. 42-43.

³⁹ Curtin, G.G., Sommer, M. H. and Sommer, V. 2003. *The World of E-government*. The Haworth Press, Inc.: USA. p.4.

⁴⁰ Ibid.

finding better ways to deliver public services sensibly and efficiently to meet citizens' expectations.⁴¹

The last element of good governance is effectiveness. Alfonso *et al* argue that effectiveness relates to whether anticipated outcomes have been achieved in a successful manner. Effectiveness entails the appropriate use of resources used to achieve the set objectives.⁴²

In summary, governance is deemed 'good' if it ensures "that political, social and economic priorities are based on broad consensus in society and that the voice of the poorest and the most vulnerable are heard in decision making over the allocation of development resources."⁴³ Amongst other things, it is about efficiency, which implies having the time and resources to facilitate the delivery of public services and effectiveness which means the appropriateness of efforts undertaken to ensure the provision of public services and responsiveness "which relates to the link between the communication needed and the capacity to address such."⁴⁴

2.5 E-government and E-governance

For the purposes of this study, it is important to distinguish between the terms e-government and e-governance. The term e-government refers to the management and organization of government information as well as its dissemination. In this context, government as a source of information keeps the public informed by collecting, analysing, organising and managing this information and making it accessible to the public.⁴⁵ E-government has been defined by Van Rooyen and Van Jaarsveldt as a developed centralised strategy in ICT infrastructure to upgrade information management and therefore the dissemination of information to the populace.⁴⁶ The provision of

⁴¹ Abdellatif, A. M. 2003. "Good Governance and Its Relationship to Democracy and Economic Development. Global Forum III on Fighting Corruption and Safeguarding Integrity." Seoul, 20-31 May. p.25.

⁴² Afonso, A., Schuknecht, L. and Tanzi, V. 2005. 'Public Sector Efficiency: An International Comparison'. *Public Choice* 123(3-4): pp. 321ff.

⁴³ Abdellatif, A. M. 2003. "Good Governance and Its Relationship to Democracy and Economic Development. Global Forum III on Fighting Corruption and Safeguarding Integrity." Seoul, 20-31 May. p.15.

⁴⁴ Ibid.

⁴⁵ Curtin, G.G., Somer, M. H. and Sommer, V. 2003. *The World of E-government*. The Haworth Press, Inc.: USA. p.4.

⁴⁶ Van Rooyen, E.J. and Van Jaarsveldt, L.C. 2003. 'A South African Developmental Perspective on E-Government.' SAIPA/SAAPM. *Public Administration*. 38 (3.1): 236-252. p. 249.

information is to ensure that citizens have access to up-to-date and accurate information on government activities.⁴⁷

On the other hand, e-governance involves the *use* of ICTs, especially the Internet, the World Wide Web (WWW) and mobile computing as a *point of interaction* between the government and the public.⁴⁸ “It is the application of ICTs in the interaction between government and citizens as well as in internal government operations to simplify and improve democratic, government and business aspects.”⁴⁹ E-governance is therefore more than simply information management and/or dissemination. Access to government is through a two-way online transaction between the public and the government. According to Shibulane, e-governance means governments going beyond using ICTs as mere sources of government information to actually using such information to create a point of interaction between the government and the citizens in the provision of public services.⁵⁰ This creates room for interaction between the government and citizens in the delivery of government products and services.⁵¹ This in a sense brings government closer to the people.

In essence, e-governance “involves new styles of leadership, new ways of accessing services, new ways of transacting business, new ways of accessing education, new ways of listening to citizens and new ways of organising and delivering information”, which is part of reforming the public sector.⁵² It is about deploying online measures that can initiate real-time interaction in the manner at which public services are provided.⁵³ The importance of this is to enhance the efficiency and effectiveness of how these services are provided.⁵⁴

⁴⁷ Ibid., p.250.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Shibulane, J. 2001. *E-government*: Available at:http://www.dpsa.gov.za/documents/service_delivery_review/Launch%20Edition/e-government%20an%20overview.pdf p.42.

⁵¹ Riley, T.B. 2003. *E-government versus E-governance: Examining the differences in a changing public sector climate*. International Tracking Survey Report. Number four. Available at: http://www.electronicgov.net/pubs/research_papers/tracking03/IntlTrackRptMay03no4.pdf

⁵² Pippa, N. 2004. “Deepening Democracy via E-Governance.” Draft paper for the UN World Bank Public Sector Report. p.2.

⁵³ Sallowan, A. 2006. *ICT in Rural Areas of the UK: Towards E-governance and Rural Development. The Rural Citizen: Governance, Culture and Wellbeing in the 21st Century*. University of Plymouth. United Kingdom. Available at: <http://www.ruralfuturesconference.org/2006/Sallowm.pdf> p.7.

⁵⁴ Ibid.

A number of reports have been made in support of e-governance initiatives as a part of the larger move towards public sector reforms. These include: the 1993 National Performance Review in the United States; the 1994 Bangemann Report in the European Union; and the 1997 Modernising Government White Paper in the United Kingdom (UK). Each of these reports stressed the importance of e-governance being adopted to become part of the public sector reform agenda.⁵⁵ The 2008 United Nations E-Government Survey, for example, stressed the need for connected governance.⁵⁶ This entails, amongst other aspects, moves towards the decentralisation of service delivery, as well as including the public more meaningfully in matters of governance, such as participation in decision making processes, through accessing government online.⁵⁷

The United Nations (UN) identifies three delivery models of e-governance, namely:

- the interaction between government and citizen (G2C);
- the interaction between government and business (G2B) and
- internal government operations (G2G) to simplify and improve the business aspects of governance.⁵⁸

The distinction between these three models highlights the key aspect of e-governance in relation to how the government organises itself to the online delivery of the various public services.

This research report will reflect on each of these three models (G2C, G2B and G2G) and consider the extent to which they are applicable in the specific countries presented in the case studies. Some authors, such as Kitaw, mention that G2C can promote greater transparency and accountability, leading to better governance by reducing opportunities for corruption. The use of

⁵⁵ Pippa, N. 2004. "Deepening Democracy via E-Governance." Draft paper for the UN World Bank Public Sector Report. p.1.

⁵⁶ United Nations E-Government Survey 2008: *From E-government to Connected Governance*. Department of Economic and Social Affairs. United Nations: New York. p.25.

⁵⁷ World Bank. 2000. *Reforming Public Institutions and Strengthening Governance*. The International Bank for Reconstruction and Development / THE WORLD BANK: Washington D.C. p.28.

⁵⁸ UN Global E-Government Readiness Report 2005: *From E-government to E-inclusion*. Department of Economic and Social Affairs, Division for Public Administration and Development Management. United Nations: New York. p.1.

ICT applications in other development sectors, such as education, health and agriculture can be conducive to the empowerment of citizens enabling citizens to participate in governance matters.⁵⁹ Kitaw further highlights that the G2G can enable transformation in public administration to improve the rate of efficiency and effectiveness at which the government operates both internally and externally.⁶⁰ Shibulane, for example, argues that the increase in access to technological apparatus such as computers and the Internet, has led to the expectation that governments must utilize ICTs to enhance how they interact as well as deliver services to the public.⁶¹ In other words, this means finding technological platforms and applications that promote a new model for doing business in government that meets basic requirements such as citizen empowerment and ease of access to services.⁶²

According to Zussman, electronic technologies have the potential to facilitate client-centred service delivery. The online experience of accessing services is a form of transaction that happens in such a way that “the client is catered for individually as needs can be recognised specifically, which in turn leads to efficiency by enhancing accuracy and quality in the way things are done.”⁶³

Curtin *et al* argue that the availability of multiple online service points at various locations can ease congestion and costs in government departments as alternative sources for service provision.⁶⁴ This means that e-governance can improve service delivery through faster processing as technology replaces manual and cumbersome procedures. Faster processing of

⁵⁹ Kitaw, Y. 2006. *E-Government in Africa: Prospects, Challenges and Practices*. Available at: http://www.friends-partners.org/GLOSAS/Global_University/Global%20University%20System/List%20Distributions/2008/MTI1948_05-27-08/E-Government_in_Africa%20copy.pdf p.14.

⁶⁰ Ibid.

⁶¹ Shibulane, J. 2001. *E-government*: Available at: http://www.dpsa.gov.za/documents/service_delivery_review/Launch%20Edition/e-government%20an%20overview.pdf p.42.

⁶² Ibid.

⁶³ Zussman, D. 2002. *Governance in the Public Service: How is Technology Changing the Rules?* Keynote address: Commonwealth Centre for Electronic Governance Integrating Government with New Technologies: How is Technology Changing the Public Sector? Available at: <http://www.rileyis.com/seminars/> p. 7.

⁶⁴ Curtin, G.G., Sommer, M. H. and Sommer, V. 2003. *The World of E-government*. The Haworth Press, Inc.: USA. p.33.

applications enhances the rate of accuracy and legibility which reduces the chances of, for instance, losing application forms as is common in manual application processes.⁶⁵

Zussman contends that the new ways of organising and delivering information reflects the networking capability of ICTs that facilitates information pooling. ICTs can enhance communication, which is key to interaction.⁶⁶ Ackerman explains that ICTs can flatten the traditional management hierarchies to enable more access to both information and people. More access can create a stage for citizen participation, which, in turn, can contribute to empowering citizens by providing them access to decision-making.⁶⁷ In addition to these, Marche and McNiven state that this enables the application of online public forums on government websites where citizens can actively engage with the government in the process of decision-making through expanded public consultations to affect the political process.⁶⁸

Welch and Pandey raise the argument that the use of advanced ICTs and the software applications that run them highlight their potential to promote aspects such as accountability, transparency and responsiveness. For example, such aspects can be enhanced by the fact that the online application of administrative practices and procedures are standardised. This means that the decision-making systems are electronically embedded which can reduce the chance of government officials being involved in corrupt practices such as using their discretion to manipulate information and influence procedures for their benefit.⁶⁹ In addition to this, Welch and Pandey highlight the fact that online procedures can allow for decisions and actions to be easily traced as citizens are exposed to mechanisms for making and handling complaints together with documentation for following them up.⁷⁰

⁶⁵ Ibid.

⁶⁶ Zussman, D. 2002. *Governance in the Public Service: How is Technology Changing the Rules?* Keynote address: Commonwealth Centre for Electronic Governance Integrating Government with New Technologies: How is Technology Changing the Public Sector? Available at: <http://www.rileyis.com/seminars/> p.8.

⁶⁷ Ackerman, J. 2004. 'Co-governance for Accountability: Beyond "exit" and "voice."' *World Development*. 32(3): 447-463. p.449.

⁶⁸ Marche, S., and McNiven, J.D. 2003. 'E-government and E-governance: The future isn't what it used to be'. *Canadian Journal of Administrative Sciences*. 20 (1): 74-86. p.73.

⁶⁹ Welch, E.W. and Pandey, S.K. 2007. 'E-government and Bureaucracy: Toward a Better Understanding of Intranet Implementation and its Effects in Red Tape'. *Public Administration Research and Theory*. 17 (3): 379-404. p.380.

⁷⁰ Ibid., p. 308.

In a similar vein, Rose states that ICTs and the applications that run them can also enhance transparency in the management or handling of government data, decision making, actions, rules and procedures which result in checks on the performance of government agencies.⁷¹ Rose argues that this can also facilitate online consultation in which the government takes feedback from citizens, in order to respond to various aspects such as the quality of public services provided. The use of ICTs in this context can enable a freer flow of information between the various agencies, departments and layers of government as well as between the government and citizens to identify and solve problems.⁷²

According to Pippa, the popularity of e-governance is closely related to global public sector reforms and has resulted in certain consequences for government:⁷³

The growth of e-governance accompanied other related changes transforming the public sector and increasing the complexity of government during the last decade, notably the 'marketization' of government services to outside agencies; the growth of multilayered governance at local, regional, national and supranational levels; the 'new public management' exemplified by the use of performance targets, incentives, and customer-orientations; and the rise of 'mediated' governance, including the growing role of NGOs and the new media.⁷⁴

Hill and Lynn advocate management in the public sector promoting entrepreneurship contrary to traditional public administration. In their view, administrative practice is moving away from hierarchical government towards horizontal and associational modes of governance.⁷⁵ In the provision of public services, "the administrative state is now less bureaucratic, less hierarchical and less reliant on central authority to mandate action."⁷⁶ Peters argues that the structure of the traditional model hindered effectiveness along various assumptions. For instance, the old model of public administration was characterised with passivity in the sense that the civil servants were

⁷¹ Rose, R. 2005. 'A Global Diffusion Model of E-Governance'. *Public Policy* 25 (1): 5-27. p.21.

⁷² Ibid.

⁷³ Pippa, N. 2004. "Deepening Democracy via E-Governance." Draft paper for the UN World Bank Public Sector Report. p.2.

⁷⁴ Ibid.

⁷⁵ Hill, C. J and Lynn, L.E 2005. 'Is Hierarchical Governance in Decline? Evidence from Empirical Research'. *Journal of Public Administration Research and Theory*. 15 (2):173-195.p .173.

⁷⁶ Ibid.

simply reduced to operative actors.⁷⁷ As a result, the emphasis on networked aspects of governance has become more prominent. According to Hill and Lynn, e-government has facilitated the networking aspects of governance as part of the public sector reforms. E-governance aims for actions that allow meaningful interaction between the government, its institutions and people. This therefore means that e-governance is an integral component of the general transformation of the public sector.⁷⁸

2.5 Limits to E-governance

According to the World Bank Public Sector Report (2003), despite the apparent strengths of e-governance, it also has its weaknesses and limitations. These are especially evident in (but not limited to) developing countries. For example, some of the social aspects which limit the application and use of e-governance includes (i) low levels of literacy; (ii) poor spread of telecommunication infrastructure; (iii) low rates of accessibility; and (iv) issues of trust and abuse.⁷⁹

(i) Low levels of literacy

In the World Bank Public Sector Report (2003), low levels of literacy constrains “the use of e-governance for knowledge creation and the empowerment of people.”⁸⁰ Kitaw notes that, especially in Africa, the number of those who are literate on the continent is amongst the lowest. This is at average of 60 percent, below that of the world average which is at 80 percent.⁸¹ Education remains an essential aspect in that access and use rely on the user’s ability to be able to receive the information and make it applicable through use.⁸²

⁷⁷ Peters, B. G. 2001. *The Future of Governing*. 2nd Edition. University Press of Kansas: United States of America. p.6.

⁷⁸ Hill, C. J and Lynn, L.E 2005. ‘Is Hierarchical Governance in Decline? Evidence from Empirical Research’. *Journal of Public Administration Research and Theory*. 15 (2):173-195.p.174.

⁷⁹ World Bank Public Sector Report 2003: *E-government at the Crossroads*. United Nations: New York. p.143.

⁸⁰ Ibid.

⁸¹ Kitaw, Y. 2006. *E-Government in Africa: Prospects, Challenges and Practices*. Available at: [http://www.friends-partners.org/GLOSAS/Global University/Global%20University%20System/List%20Distributions/2008/MTI194805-27-08/E-Government in Africa%20copy.pdf](http://www.friends-partners.org/GLOSAS/Global%20University/Global%20University%20System/List%20Distributions/2008/MTI194805-27-08/E-Government%20copy.pdf) p.12.

⁸² World Bank Public Sector Report 2003: *E-government at the Crossroads*. United Nations: New York. p.143.

(ii) Poor spread of telecommunication infrastructure

According to Backus, in many developing countries, points of access to the Internet are greatly limited due to the poor spread of telecommunication infrastructure between the urban and rural areas.⁸³ In most countries, points of easy access are skewed in favour of the urban areas. In urban settings, telecommunication infrastructure tends to be well established compared to the rural areas. This means that disparity exist which, unless governments redress, argues Backus, the disadvantaged, marginalised and the poor are likely to be left out.⁸⁴

(iii) Low rates of accessibility

E-governance not only depends on telecommunication infrastructure, it also depends on the availability of amenities such as electricity. Poor spread of such, Rose argues, may lead to low rates of diffusion process amongst ICTs users in a country, especially the Internet. Electricity plays a role in the distribution and use of ICTs appliances like computers. This means that if electricity is not readily available to spearhead the spread of telecommunication infrastructure, the rate at which e-governance evolves can be hindered. This may put into question the rate at which e-governance can be relied on to enhance some of the key processes of governance.⁸⁵

(iv) Issues of trust and abuse

Many citizens continue to distrust electronic applications, some fearing that transactions will be open to abuse such as potential credit card fraud. Abbot highlights the fact that stringent and effective measures to address issues of trust and abuse have still not been well established. The Internet enables fast production and distribution of data amongst its users.⁸⁶ With the ease of production and distribution of data, Abbot notes this can be a major problem when the classified data or important information gets into the wrong hands and duplicates it for fraudulent purposes.⁸⁷ As the government moves its core processes online, communication, information and transactions to the Internet, it becomes more vulnerable. The need to have measures to address

⁸³ Backus, M. 2001. "E-governance and Developing Countries: Introduction and Examples." Research Report. (3). p. 3.

⁸⁴ Ibid.

⁸⁵ Rose, R. 2005. 'A Global Diffusion Model of e-Governance'. *Journal of Public Policy*. 25.(1): 5-27. p.11.

⁸⁶ Abbot, R. 1999. *The World as Information*. Intellect Books: Great Britain. p.1.

⁸⁷ Ibid.

such vulnerabilities becomes imperative.⁸⁸ Despite this, Backus argues that identifying possible legal barriers as well as educating and training staff and citizens on the use of e-governance, can aid in dealing with piracy and misuse.⁸⁹

2.6 Conclusion

This chapter has explored the concept of governance and examined changes in government, partly influenced by globalisation, the rapid increase in usage of ICTs and the emergence of the concept of good governance. Most significantly, it has argued that these developments have brought to the fore the emergence of e-government and e-governance. It concluded by identifying some of the limitations of e-governance that tend to be evident in developing countries.

The next chapter presents the case study of this research report. It will explore issues of governance in developing countries and some of the elements of the digital divide. It will investigate the implementation of e-governance in Africa, more specifically in South Africa, Kenya, Tanzania, Rwanda and Ethiopia. Its aim is to determine how e-governance is practised in these countries and some of the limitations they face.

⁸⁸ Kuye, J.O. and Naidoo, G. (No date). "Electronic Technology and Service Delivery in the South African Public Service." University of Pretoria. Paper Presented at the International Institute for Administrative Sciences – MAS Regional International Conference, Yaounde, Cameroon.

⁸⁹ Backus, M. 2001. "E-governance and Developing Countries: Introduction and Examples." Research Report. (3). p. 3.

Chapter Three: E-Governance in Developing Countries

A Case study of Five African Countries

3.1 Introduction

This chapter will commence by briefly summarizing various authors' opinions on governance in Africa. It will then consider issues emerging in the implementation of e-governance with more attention being paid to developing countries in Africa specifically South Africa, Kenya, Tanzania, Rwanda and Ethiopia. This is done by describing each country's current approach to e-government and the public services it provides to illustrate the application of e-governance.

3.2 Governance in Africa

Edigheji points out that many African countries are regarded as having poor governance. He attributes this to years of colonialism, ethnic wars, severe poverty and the poor formulation and implementation of policies that affect governance.⁹⁰ Another significant factor identified by him is that, at independence, the administrative structures that African governments inherited were not adequately prepared to promote human and economic development.⁹¹ Edigheji notes that many of the newly established governments came into power by nationalist liberation movements. These mainly operated along a socialist ideology which necessitated the establishment of large bureaucracies and increased state intervention in the provision of public services.⁹² Edigheji argues that this has had an impact on the expansion and growth of the civil service which over the years has been an employment site rewarding political patrons. One result is that many of the continent's public administrations have not been particularly adequate, effective or efficient enough in the delivery of public services.⁹³

Mbaku and Saxena argue that most African governments have been operating under authoritative regimes with authoritative leadership styles that maintain centralised and rigid

⁹⁰ Edigheji, O. A. 2005. "Democratic Developmental State in Africa?" Research Report 105. Centre for Policy Studies. p.1.

⁹¹ Ibid.

⁹² Ibid.

⁹³ Ibid.

structures.⁹⁴ The result is that there tends to be strong central control over public resources which undermines the performance of the public administration to monitor and distribute public resources for the common good of the people.⁹⁵ Both authors state that the strong centralised systems of governance lack mechanisms of checks and balances which make it difficult to promote accountability and responsibility.⁹⁶ The argument is further made that poor governance on the continent is facilitated by a lack of proper conflict management and resolution.⁹⁷ A number of African countries, such as Ethiopia and Rwanda, have faced years of civil war fuelled by ethnic fights for political gain and resource distribution.⁹⁸

Mbaku and Saxena mention that governance has been challenged by poorly formulated and implemented development policies with poor investment in social and public infrastructures.⁹⁹ The continent continues to be faced with “inefficient services and institutions; excessive centralisation of services, decisions, resources and powers; mismanagement of public funds and enterprises; as well as unproductive and unmotivated civil servants coupled with backward economic growth.”¹⁰⁰

Kamarck notes that at the turn of the 21st century many countries worldwide are making great efforts to make their governments work for the betterment of their citizens.¹⁰¹ Reform of the public service, Minogue *et al* argue, is based on the assumption that the structure of the old public system was not efficient as performance was not guided by essential mechanisms that motivate performance.¹⁰² Globalisation, democratisation, global economic competition and countries performance deficits, coupled with technological advancement have led to notable

⁹⁴ Mbaku, J.M. and Saxena, S.C. 2004. (Eds.). *Africa at the Crossroads: Between Regionalism and Globalization*. Praeger: Westport. p.4.

⁹⁵ Ibid.

⁹⁶ Ibid.

⁹⁷ Edigheji, O.2005. “A Democratic Developmental State in Africa?” Research Report 105. Centre for Policy Studies. p.1.

⁹⁸ Ibid.

⁹⁹ Mbaku, J.M. and Saxena, S.C. 2004. (Eds.). *Africa at the Crossroads: Between Regionalism and Globalization*. Praeger: Westport. p.4.

¹⁰⁰ Ibid.

¹⁰¹ Kamarck, E.C. 2000. “Globalization and Public Administration Reform.” In Nye, J. and Donahue, J. *Governance in a Globalising World*. Brookings Institution Press: Washington, D.C. p.229.

¹⁰² Minogue, M., Polidano, C. and Hulme, D. 1998. *Beyond the New Public Management: Changing Ideas and Practice in Governance*. Edward Elgar: Cheltenham. p.23.

changes in the main spheres of development such as economy, politics and the social order.¹⁰³ In an area of growing global ICT interconnectedness, the reality of a digital divide between developed and developing countries as well as within developing countries has become more and more apparent.

3.3 The Digital Divide

Growing steadily, global political influence in many countries have evidently brought transformation in the way things are managed in the public sector.¹⁰⁴ According to Coleman, the reform and restructuring of democratic governments and service delivery in Africa today depends on the institutions of governance in the continent such as “the parliament, the executive and the state bureaucracy being able to “adopt modern ICTs in order to transform their operations and make their work more transparent, efficient and effective.”¹⁰⁵ In spite of this, it is important to mention that the limit to the widespread application of ICTs is often ascribed to the “digital divide”.

A number of authors such as Grindle,¹⁰⁶ Nye¹⁰⁷ and Crystal,¹⁰⁸ have argued that the biggest challenge to the implementation and application of e-governance in developing countries is the so- called digital divide. Joseph and Kitlan give a simple definition of the digital divide as the separation between individuals that can easily access ICTs and those who cannot.¹⁰⁹ The six characteristics of the digital divide are mainly: (i) technological access divide; (ii) income access divide; (iii) education access divide; (iv) urban-rural access divide; (v) telecommunication access

¹⁰³ Kamarek, E.C. 2000. “Globalization and Public Administration Reform.” In Nye, J. and Donahue, J. *Governance in a Globalising World*. Brookings Institution Press: Washington, D.C. p.231.

¹⁰⁴ Minogue, M., Polidano, C. and Hulme, D. 1998. *Beyond the New Public Management: Changing Ideas and Practice in Governance*. Edward Elgar: Cheltenham. p.24.

¹⁰⁵ Coleman, S. (No date). *Africa E-governance – Opportunities and Challenges*. Available at: http://www.commissionforafrica.org/english/report/background/coleman_background.pdf.

¹⁰⁶ Grindle, M. S. 2000. “Ready or Not: The Developing World and Globalization.” In Nye, J.S. and Donahue, J.D. *Governance in a Globalizing World*. Brookings Institution Press: Washington, D.C. p.190.

¹⁰⁷ Nye, J. and Donahue, J. 2000. *Governance in a Globalising World*. Brookings Institution Press: Washington D.C.

¹⁰⁸ Crystal, D.2001. *Language and the Internet*. The Press Syndicate of the University of Cambridge: United Kingdom. p.iv.

divide and (vi) language access divide.¹¹⁰ As a result, the imminence of the problem of exclusion is one that cannot be ignored. To realise the effectiveness and the full potential of e-governance and its potential to contribute to good governance is based on the ability to “employ ICTs to level the playing field for all.”¹¹¹

(i) The technological access divide

Access is more than just technological access to ICTs. Inclusiveness refers to universal access to the use of ICTs while being connected is in terms of both having access as well as using ICTs. This also means having the necessary infrastructure on which ICT mediums rely in order to be operative (such as electricity). The ‘connection’ for the end user is about being able to log onto a computer that has a connection to the internet whether through “a dial-up connection, broadband connection or using a mobile device to connect to the internet via wireless connection. This depends on a physical network of transponders and routers; or simply having a landline telephone hardwired to a physical system that can be utilized for access.”¹¹² Access goes hand-in-hand with use. In addition to access, technology equally has to be user friendly to enable the user to be interactive with what that particular technology presents to him or her.¹¹³ This is how the telecommunication divide is different from the technological divide because telecommunication divide is concerned about the divide in the spread and ownership of ICTs such as telephones (landlines), mobile phones and Internet amongst others.

¹⁰⁹ Joseph, R. C and Kitlan, D.P. 2008. “Key Issues in E-Government and Public Administration.” In Garson, G.D. and Pour, K.M. *Handbook of Research on Public Information Technology* (2 Volumes). Information Science Reference. United States of America. p.7.

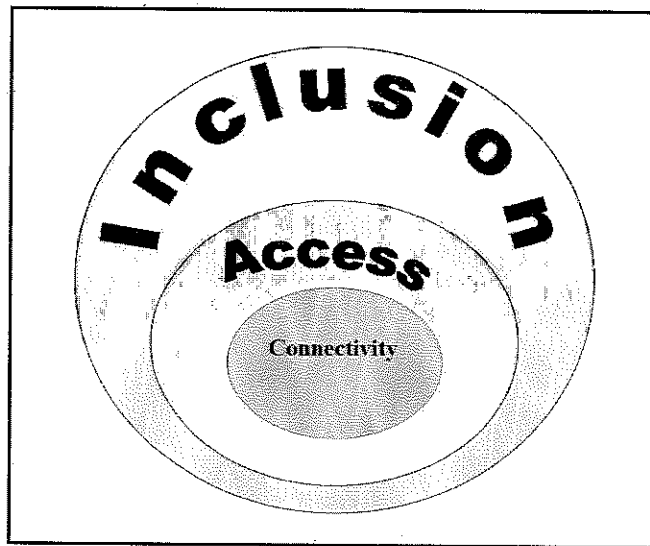
¹¹⁰ UN Global E-Government Readiness Report 2005: *From E-government to E-inclusion*. Department of Economic and Social affairs, Division for Public Administration and Development Management. United Nations: New York. p.110.

¹¹¹ Ibid., p.2.

¹¹² Ibid., p.7.

¹¹³ Ibid.

Figure 3.1: A framework of inclusion



Source: UN Global E-Government Readiness Report 2005. p.8.

(ii) The income access divide

With regards to the income access divide, Grindle argues that in many developing countries the income earning group only constitute a small percentage of the whole population.¹¹⁴ Those well-off tend to “have up-to-date computers and software, cellular phones and palm pilots.” Often those in this group are the most educated which means that they have a stable income and as a result, the ICTs are more affordable to them, compared to those who are not.¹¹⁵ Hence, those who cannot afford such ICTs fall outside the bracket of the benefits.

(iii) The education access divide

The education access divide highlights the advantage that those who are educated have with regards to acquiring skills and expertise to operate and work with ICTs. Those who have no or low levels of education are not in a position to readily use ICTs. The level of education is therefore a significant determinant in determining citizens’ competencies necessary for using

¹¹⁴ Grindle, M. S. 2000. “Ready or Not: The Developing World and Globalization.” In Nye, J.S. and Donahue, J.D. *Governance in a Globalizing World*. Brookings Institution Press: Washington, D.C. p.190.

¹¹⁵ Ibid.

ICTs.¹¹⁶ Selwyn and Facer argue that “it has become no longer enough to be able to read the printed word. Individuals need to have the ability to both critically interpret the powerful images of a multimedia culture and express themselves in multiple media forms.” This means being able to learn different skills and acquire knowledge to make informed and empowered choices about the use of ICTs.¹¹⁷

(iv) The urban-rural access divide

According to the World Bank Public Sector Report (2003), the majority of the population living in developing countries are poor and live in underdeveloped rural areas. People in rural areas are “often illiterate or just barely literate, lack access to telephones and have never had direct access to computers.”¹¹⁸ In urban settings, telecommunication infrastructure is much more established compared to rural areas. Those better educated tend to live in urban areas with better established infrastructure such as electricity networks and systems of telecommunication. These make for readily available access to information technologies. Urban areas therefore offer easier access and more usage potential of various ICTs. In most countries, points of easy access are skewed in favour of the urban areas.¹¹⁹ To a great extent, Grindle argues that the lack of basic infrastructure not only reduces rural populations’ access but also their chances to become familiar with the technological opportunities that “characterise the current era.”¹²⁰

(v) The telecommunication access divide

Despite the technological progress in the last decade, it is still evident that there are relative inequalities between those who use such technology and those who are not users. This is referred to as telecommunication access divide due to inadequate distribution of telecommunication infrastructures.¹²¹ The availability of telecommunication indices such as the Internet, cellular

¹¹⁶ Neil Selwyn and Keri Facer, 2007. *Beyond the Digital Divide: Rethinking Digital Inclusion for the 21st Century*. Available at: http://www.futurelab.org.uk/resources/documents/opening_education/Digital_Divide.pdf p.11.

¹¹⁷ Ibid.

¹¹⁸ World Bank Public Sector Report 2003: *E-government at the Crossroads*. United Nations: New York. p.143.

¹¹⁹ Ibid.

¹²⁰ Grindle, M. S. 2000. “Ready or Not: The Developing World and Globalization.” In Nye, J.S. and Donahue, J.D. *Governance in a Globalizing World*. Brookings Institution Press: Washington, D.C. p.191.

¹²¹ UN Global E-Government Readiness Report 2005: *From E-government to E-inclusion*. Department of Economic and Social affairs, Division for Public Administration and Development Management. United Nations: New York. p.131.

phones and online applications appear to be lower in the majority of developing countries, such as those in Africa, compared to the developed world. For instance, while the world average for Internet use and penetration is 40 percent, in Africa it is only 6 percent and 2.6 percent respectively, while cellular subscriptions and distribution is 4 percent.¹²² (See Annex 2). This illustrates the poor distribution of telecommunication in Africa compared to the rest of the world.¹²³

According to Rose, developed countries often contribute to the lagging behind of ICTs developments in developing countries. The telecommunication access-divide is not only present within a country but also between developed and developing countries.¹²⁴ He argues, for example, that ICTs that are no longer used or outdated in developed countries are transferred to developing countries, which means that developing countries do not keep up with recent developments.¹²⁵

(vi) The language divide

Crystal argues that the importance of language in a technology-driven environment is paramount. ICTs empower citizens to become “informed about the truth of their economic, political and cultural circumstances and to give them a voice lies in that person’s capability to use their own language on global information networks such as the Internet to determine the extent in which they participate.”¹²⁶ As discussed above, ICTs are often imported from developed countries, especially the United States of America, where the dominant language is English. Software programmes are therefore predominantly in English. It is difficult to adapt content to the local language. Such is evident in the dominance of the English language on the World Wide Web (WWW) and the Internet.¹²⁷ This limits non-English speakers from accessing and using ICTs.

¹²² World Telecommunication Development Report 2006: *Measuring ICT for Social and Economic Development*. International Telecommunication Union. p. 7, 4 and 2.

¹²³ Rose, R. 2005. ‘A Global Diffusion Model of e-Governance’. *Journal of Public Policy*. 25.(1): 5-27. p.11.

¹²⁴ Ibid.

¹²⁵ Ibid.

¹²⁶ Crystal, D.2001. *Language and the Internet*. The Press Syndicate of the University of Cambridge: United Kingdom. p.iv.

¹²⁷ UN Global E-Government Readiness Report 2005: *From E-government to E-inclusion*. Department of Economic and Social affairs, Division for Public Administration and Development Management. United Nations: New York. p.131.

The digital divide argument highlights the danger in a relenting pursuit of opportunity that the ICTs may offer, without taking note of its unequal diffusion of economic and social opportunities.¹²⁸ The discussion above highlights the importance of understanding and addressing the different aspects that make up the digital divide prior to commencing e-governance in any particular country otherwise the benefits will elude the majority who are poor and illiterate. This reality has led to the United Nations ranking countries according to their e-governance readiness in order to highlight the different digital gaps that exist.

3.4 E-governance readiness

E-government readiness refers to the potential of a country's ability in terms of how well it could facilitate the implementation and application of an e-governance initiative despite the challenges it may face. In essence, it reflects on a country's capacity to implement e-governance.¹²⁹ According to the World Bank Public Sector Report (2003), some of the key criteria that determine e-governance readiness include connectivity, information security and human capital.¹³⁰ The Report considers ICT availability and accessibility as well as the quality and reliability as needful to connectivity. For e-governance to be successful, people to whom its use is directed should have the will and confidence to use the online services more frequently.¹³¹ To enhance this, the Report also highlights the need for networked information offered online to transact service delivery being protected within a proper functioning legal framework to ensure trust amongst users. In addition to these, the availability of human capital to support the process of e-governance is an important determinant of e-governance readiness. For example, the availability of adequately trained personnel with the necessary skills to implement and sustain the process.¹³²

¹²⁸ Ibid.

¹²⁹ Ibid., p.17.

¹³⁰ World Sector Report 2003. *E-Government at the Crossroads*. United Nations: New York. p.13.

¹³¹ Ibid., p.14.

¹³² Ibid., p.15.

Four indices are used to assess the E-governance readiness of any particular country:

- **Web Measure Index.** This is a quantitative index which measures the generic ability of governments to apply e-government as a tool to interact, transact, inform and network with its citizens.¹³³
- **Telecommunications Infrastructure Index.** This index considers the availability of ICTs with regard to who has access to Internet services, telephone lines, mobile phones or owns personal computers (PCs) amongst others.¹³⁴
- **Human Capital Index.** This index looks at the education level of the populace, the adult literacy rate across primary, secondary and tertiary.
- **E-participation:** This index refers to the level in which people are able to use ICTs to get interactive with their government “as consumers of public services and to participate in the political process as citizens.”¹³⁵

Combining the overall results of the four indices determines how countries are ranked on the e-government readiness index.¹³⁶ Out of the 52 countries in Africa, 45 countries have taken the initiative to create and establish national ICT policies and equally automated administrative processes and services that try to enable interactivity between the government and its citizens.¹³⁷ According to the E-governance Readiness Index, South Africa is ranked 2nd, Kenya 12th, Tanzania 15th, Rwanda 24th and Ethiopia 42nd. (See Appendix 6). The next chapter will present a case study of e-governance by examining each of these five countries status regarding their implementation of e-governance and identifying possible examples of the digital divides.

¹³³ UN E-Government Survey 2008: *From E-government to Connected Governance*. Department of Economic and Social affairs, Division for Public Administration and Development Management. United Nations: New York. p.15.

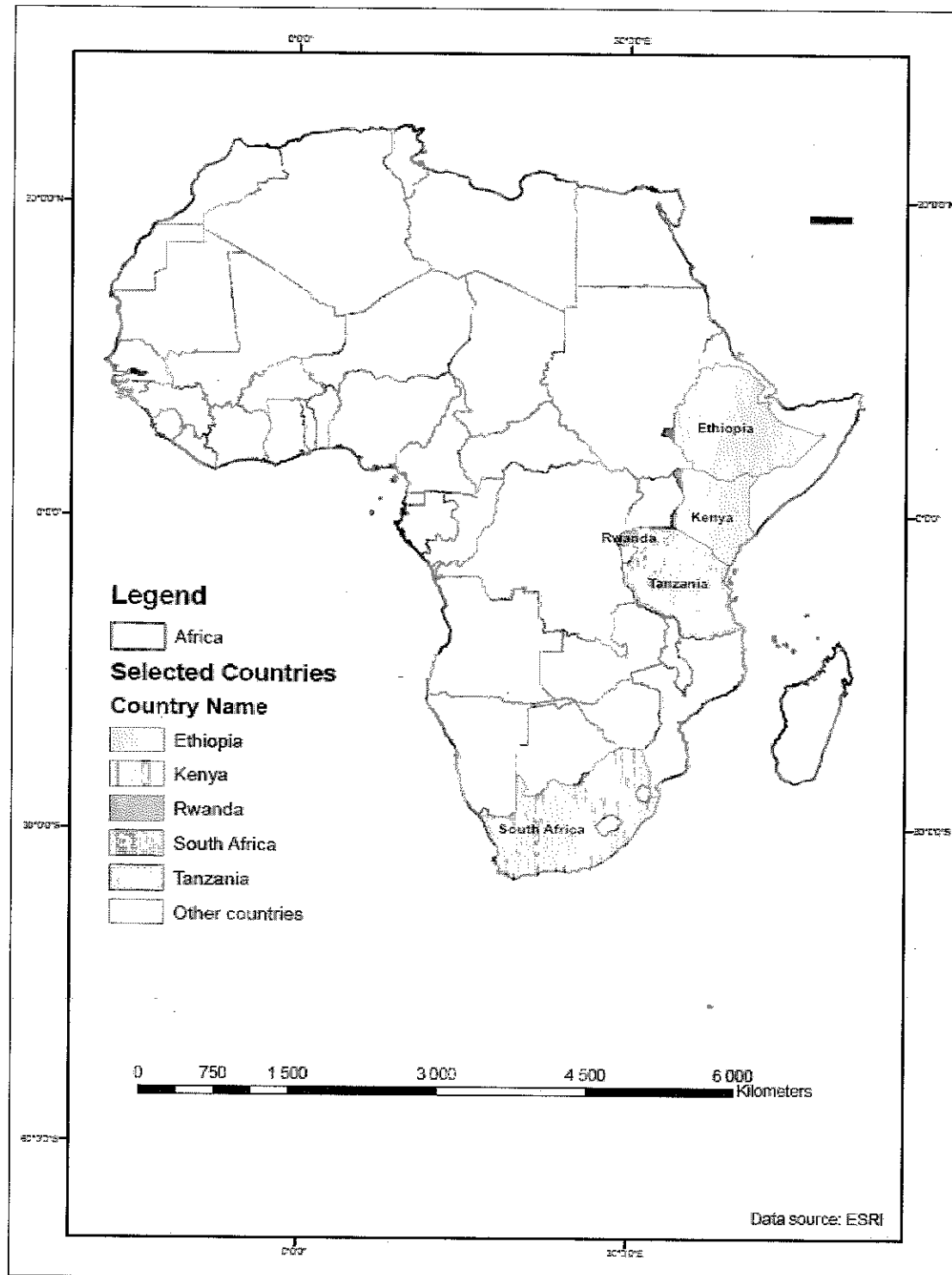
¹³⁴ Ibid., p.16.

¹³⁵ Ibid., p. 17.

¹³⁶ World Sector Report 2003. *E-Government at the Crossroads*. United Nations: New York. p. 15.

¹³⁷ Kitaw, Y. 2006. *E-Government in Africa: Prospects, Challenges and Practices*. Available at: http://www.friends-partners.org/GLOSAS/Global_University/Global%20University%20System/List%20Distributions/2008/MTI1948_05-27-08/E-Government_in_Africa%20copy.pdf p.6.

Map 3:1 Map of Africa showing the five countries (South Africa, Kenya, Tanzania, Rwanda and Ethiopia)



3.5 South Africa

3.5.1 Historical Background

South Africa is located in the most southern part of Africa, bordered by the Atlantic Ocean on the West and the Indian Ocean on the East. It shares borders with Namibia, Botswana and Zimbabwe and Mozambique. (See Map 3.1). Horwitz contends that the history of apartheid in South Africa played a major role in the country's developmental progress. During the apartheid years, monopolistic policies denied Africans access to public communication and participation in public life.¹³⁸ South Africa is currently a liberal democracy. The majority of the population reside in rural, poor and underdeveloped areas, with little or no infrastructure. With the advent of democracy in 1994, the previously closed and exclusive political environment of the apartheid regime underwent significant changes that eventually opened up communication, access to information and free speech for all.¹³⁹

Table 1 Demographics of South Africa

Population: The country's total population is 48,782,756. It is regarded as a distinctively heterogeneous population consisting of four racial groups, Africans, Whites, Indians and Coloureds of which Africans are the majority.
Rural/urban: Although there is widespread rural to urban migration, 43 percent of the population reside in rural areas which are not well developed in terms of infrastructure.
Poverty levels and literacy: South Africa's economy is one of the largest in Africa with an average positive economic growth rate of 3.2 percent. Since 1994, the government has directed its spending to socio-economic aspects but the level of poverty is still relatively high, where 40 percent of the population is classified as poor. The average level of literacy is currently 86.4 percent, (of which males constitute approximately 87 percent and females 85.7 percent literacy levels). ¹⁴⁰
Languages (Official languages): The country has eleven official languages; Afrikaans, English, Ndebele, Sepedi, Siswati, Sesotho, Setswana, Tsonga, Venda, IsiXhosa and IsiZulu. However, English remains the dominant language in the public sphere.

Source: Adapted from <https://www.cia.gov/library/publications/the-world-factbook/geos/et.html>

¹³⁸ Horwitz, R.B. 2001. *Communication and Democratic Reform in South Africa*. The Press Syndicate of the University of Cambridge. United Kingdom. p.19.

¹³⁹ Ibid., p.18.

¹⁴⁰ Landman, P. J. 2003. *Breaking the Grip of Poverty and Inequality in South Africa 2004-2014. Current trends, issues and future policy*. Available at: <http://www.ukzn.ac.za/ccs/files/P661-Povertyreport3b.pdf> p.1.

3.5.2 State of ICTs in South Africa

South Africa is ranked second (after Mauritius) on the continent, and 58th globally with regard to its state of ICTs. Its e-government web measure index is 0.55. Based on Internet users, the country is ranked 121st out of the 177 countries worldwide.¹⁴¹ The number of Internet users estimated in 2009 was 5,300,000 people with the rate of Internet penetration estimated at 10.8 percent of the overall population.¹⁴² Only 9.7 percent have telephone lines, but 88.4 percent are cell phone subscribers. However, only 9.1 percent are Internet subscribers. The percentage of those who own personal computers is 8.5 percent.¹⁴³ (See Annex 1).

3.5.3 E-governance in South Africa

The provision and management of telecommunication services and the management of ICTs is shared across a number of government departments namely the Department of Communication, Department of Public Enterprise and the Department of Public Service and Administration.¹⁴⁴ In addition, many parastatals, such as the South African Post Office (SAPO), Telkom and the State Information Technology Agency (SITA) and private sector enterprises provide telecommunication services. According to Van Rooyen *et al* the South African government started setting up a number of e-governance projects in 1994.¹⁴⁵ Its official government portal is named *South Africa Government Online*, (See Figure 3.1).

¹⁴¹ Human Development Report 2007/2008. *Fighting Development Report: Human Solidarity in a Divided World*. United Nations Development Programme. Palgrave Macmillan: New York. p.275.

¹⁴² Internet World Stats: *Internet Usage Statistics for Africa*. Available at: <http://www.internetworldstats.com/stats1.htm>

¹⁴³ Information and Communication for Development 2009: *Extending Reach and Increasing Impact*. The World Bank: Washington, D.C. p. 282.

¹⁴⁴ *Communications* (No author and date). Available at: <http://www.southafrica-newyork.net/consulate/about%20south%20africa/2007%20Yearbook/communications.pdf> pp.132-133.

¹⁴⁵ Van Rooyen, E.J. and Van Jaarsveldt, L.C. 2003. 'A South African Developmental Perspective on E-Government'. *Public Administration*. 38 (3.1): 236-252. p.239.

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Cabinet welcomes news about antiretroviral get against HIV

Cabinet welcomed the groundbreaking news that a study had established that an antiretroviral microbicide reduces the rate of HIV and herpes infections in women by 40% and 51 % respectively.

Motsoaledi gives update on AIDS programme at international conference

Since the launch of the HIV Counselling and Testing (HCT) campaign at the end of April about 1 million people have tested voluntarily for HIV and 70 605 have been enrolled onto the antiretroviral treatment programme.

SA population close to 50 million

According to the latest mid-year population estimates by Statistics South Africa, the country has a population of 49.99 million. Fifty-one per cent (approximately 25.66 million) of the population is female.

Documents for comment

The deadline for submissions on the Defence Amendment Bill to Parliament has been

Latest news

President Zuma to brief media on outcomes of Lekgotla

President Jacob Zuma will on Thursday, 22 July brief members of the media on the outcomes of the Cabinet Lekgotla which took place from Tuesday, 20 July 2010 at the Presidential Guesthouse in Pretoria.

Women power at the Cabinet Lekgotla. From left are Minister of Defence and Military Veterans Lindwe Sibulu, Minister of International Relations and Cooperation Maite Nkomo-Mahabane, Minister of Arts and Culture Lulu Xingwana and Minister of Science and Technology Ndleleni Pandor.

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The main government portal provides links to both non-interactive and interactive public services – this is mainly an example of the G2C e-governance delivery model. Some of the non-interactive services include the provision of access to official government documents. For example, legislation, draft bills, white papers, reports, speeches and public statements. It provides general information on South Africa, and the contact details of each government department. The contact details for government officials are available under their respective ministries. Most of the contact details include their names and contact numbers. Each official's email address and phone numbers are personalised. Links to provincial and local government departments are also operative, however while the links to local municipalities are operative, the actual websites of many of the local and district municipalities are basic, providing some generic contact details and background information on the specific municipality. In fact, only nine of the 41 district municipalities are online.

The government portal is user friendly and the content is well organised. Links to other websites are operative and the information is current and easily accessible. The website is well maintained and frequently updated with the last update being on 2nd September 2010.¹⁴⁶ The dominant language used on the website is English. However, users are able to change the language to any of the country's 11 official languages.

The main government portal does provide some online public services such as: electronic submissions of tax returns, payment of licences, discussion forums, passport applications and online facilities for amending or updating corporate information. Most of the services offered are mainly to make application and to pay taxes and licences (which is characteristic of the G2B e-governance delivery model). For instance, the South African Revenue Services (SARS) was the first public service entity to go on-line and provides Internet-based tax filing and payment services. The system enables electronic applications for registration as a taxpayer, submission of tax returns as well as payments by both tax practitioners and taxpayers. It is argued that this has

¹⁴⁶ Frequently here means that all pages accessed for the purpose of this study had been updated in the last six months.

improved the efficiency and effectiveness of government to collect taxes and tariffs from individual tax payers and businesses.¹⁴⁷ (See Annex 7).

Besides online transactions, Beyers highlights that e-governance can contribute to address some of the social-economic needs. One example in South Africa is the provision of quality education in rural areas through *Ulwazi*. This is an e-learning outreach education program that provides online education in science and maths to learners in schools located in rural areas. This initiative connects teachers and students online through a tele-learning system.¹⁴⁸ It is a collaborative initiative between private industries such as Motorola, Omega Digital Technologies and the national government Department of Education. Learners in these areas get taught through live video transmissions directly on their computers, aided by a microphone they can use to ask and answer questions. This enables learners at schools which do not have qualified teachers to receive quality education while simultaneously providing them the opportunity to interact with learners from other schools.¹⁴⁹

An example of the G2G e-governance service model is the online e-Justice programme of the national government Department of Justice.¹⁵⁰ This programme was designed to improve and support the transformation of the justice administration system from a dominantly manual operated system to an automated one. Van Rooyen *et al* argue that the administrative justice system lacked the capacity to process applications which resulted in too much time being consumed dealing manually with paperwork. Cases increasingly piled up, with some being lost. The design and application of this online administrative e-Justice system has improved the process of jurisprudence by prosecutors.¹⁵¹

E-governance can be a tool for networking among government departments and institutions. One of the most prominent examples of online government networking is the South African Cities

¹⁴⁷ Van Rooyen, E.J. and Van Jaarsveldt, L.C. 2003. 'A South African Developmental Perspective on E-Government'. *Public Administration*. 38 (3.1): 236-252. p.239.

¹⁴⁸ Beyers, R. 2003. *The Mamelodi Broadband E-learning Pilot Project: Summary Document*. Available at: <http://www.ulwaziproject.co.za/UlwaziSummary5.pdf>

¹⁴⁹ Ibid.

¹⁵⁰ Van Rooyen, E.J. and Van Jaarsveldt, L.C. 2003. 'A South African Developmental Perspective on E-Government'. *Public Administration*. 38 (3.1): 236-252. p.239.

¹⁵¹ Ibid.

Network, a partnership of nine cities in South Africa.¹⁵² It acts as a forum for municipal debate as well as the sharing of best practices. It publishes monthly newsletters and member municipalities report back on their experiences. The South African Cities Network has encouraged its members to pursue e-governance to assist municipalities with providing services.¹⁵³ In one such submission, the Cape Town metropolitan municipality claimed that e-governance has increased the efficiency and effectiveness of the municipality in the provision of public services to the city's residents. It described Cape Town's *Smart City Initiative* and *e-Governance Incorporated* as able to provide Cape Town residents with online access to government services in a seamless and integrated manner.¹⁵⁴ Through the Smart City Initiative and the City's E-Government Incorporated, a network of contact centres and citizen service centres was set up to ensure that residents have access to government services. The initial phase of the project was aimed at giving information about government services identifying the respective point where these services could be accessed. The second phase was to offer online services such as applying for various licences, as well as paying utility bills. In addition, a customer care service was introduced as part of the initiative through which citizens would be able to call and enquire about services they needed from the government in their language of preference.¹⁵⁵

Currently, the city of Cape Town's website has been expanded to become a comprehensive directory of some of the city's main public services. Residents can query and pay for most basic services online.¹⁵⁶ This promotes efficiency and effectiveness. However, the number of interactive G2C e-governance services offered, such as discussion forums, are limited and do not facilitate any significant interaction between the government and the public, which means that participation is insignificant. Political parties, such as the Democratic Alliance (DA), tend to be more interactive and have a number of blogs and on-line public forums.

¹⁵² South African Cities Network. 2006. *State of the Cities Report*. Available at: http://www.sacities.net/2006/state_of_cities_2006.stm

¹⁵³ Ibid.

¹⁵⁴ Ibid.

¹⁵⁵ Ramaite, R. 2003. 'Gateway to Quality Service Delivery'. *Service Delivery Review* Vol. 2 No. 2, (14-51).

¹⁵⁶ CapeTown (No date) Available at: <http://www.capetown.gov.za/en/Pages/default.aspx>

3.5.3 South Africa and the Digital Divide

South Africa experiences the various types of digital divides. For example, despite the country's advanced telecommunication infrastructure, the availability of infrastructure remains predominantly in urban areas. Sutcliffe argues that access to technological and telecommunication facilities remain largely biased towards those who live in urban areas compared to those in rural areas.¹⁵⁷ He points out that residents in urban areas are better educated, economically more active with more disposable income, and can therefore more easily afford access and know how to make use of ICTs such as the Internet.¹⁵⁸

There is a link between the income and education access divide and the urban-rural access divide. Landman argues that the state of poverty in South Africa (as is the case in many other developing countries) is evidently differentiated along race, gender and urban-rural divides. The population in rural areas are mostly illiterate, have low income levels and remain poor due to inadequate basic infrastructure to promote and enable economic growth and development. This means that the lack of equity in income distribution and lower levels of literacy in the end affects how these people access and use ICTs.¹⁵⁹ As a result, the technological access divide; the income-and-education access divide; the urban-rural access divide; as well as the telecommunication access divide remain prominent, while the language access divide is progressively being eliminated as many e-services are being provided in the other official languages.

Ramaite claims that although e-governance is widely applied in South Africa, there are problems of trust and abuse. There are those who remain doubtful of its suitability in government operations and it is therefore still approached with suspicion.¹⁶⁰ Ramaite highlights that Information Technology (IT) specialists have faced "unexpected levels of resistance to both the structural and technological elements" by government of e-governance application. Some

¹⁵⁷ Sutcliffe, M. (No date) *The South African Demarcation Process*. Available at: http://www.pacte.cnrs.fr/IMG/pdf_04_Sutcliffe.Mun_Dem_Bdoc.pdf p.4.

¹⁵⁸ Ibid.

¹⁵⁹ Landman, P. J. 2003. *Breaking the Grip of Poverty and Inequality in South Africa 2004-2014. Current trends, issues and future policy*. Available at: <http://www.ukzn.ac.za/ccs/files/P661-Povertyreport3b.pdf> p.7.

¹⁶⁰ Ramaite, R. 2003. 'Gateway to Quality Service Delivery'. *Service Delivery Review*. 2 (2): 14-51.p.14.

government departments, he claims, have grown accustomed to their traditional operations and have been reluctant to adopt online administrative applications.¹⁶¹

Ramaite also contends that although South Africa possesses the necessary technological infrastructure, there is a serious lack of IT skills. He argues that South Africa has experienced a loss of technical IT skills due to the 'brain drain'. Adequate resources and skills including strategic management are all vital to coordinate and oversee both the implementation and application of e-governance.¹⁶²

Although he claims that public administration has become more efficient as a result of the increasing use of ICTs, the use of technology in government operations is still generally approached with suspicion. Ramaite highlights that amongst the challenges that the government has faced is the "unexpected levels of resistance to both the structural and technological elements" of e-governance applications. The various departments are used to an accustomed structure of their operations and have been a bit reluctant to adopt some of the e-governance applications. The full potential of ICTs for the purposes of efficient and effective service delivery, he argues, can only become realisable if users trust ICTs and recognise the need to adopt such technologies.¹⁶³

3.6 Kenya

3.6.1 Historical Background

Kenya is located in the Eastern part of Africa. It neighbours include Somali to the East, Tanzania to the South, Uganda to the West and Ethiopia to the North. (See Map 3.1). Kenya has since its independence in 1963 been ruled by an authoritative regime. Although the former president was forced to legalise multiparty politics in 1991, the country only became a democracy in 2002 after the opposition party won. The state of governance in Kenya is through government line Ministries, Parastatals, Office of the President, Local Authorities, and Regional Authorities.¹⁶⁴

¹⁶¹ Ibid.

¹⁶² Ibid., p.51.

¹⁶³ Ibid., p.49.

¹⁶⁴ Mitullah, W.V. and Wamea, T. 2005. *Local Governance and ICTs Research Network for African LOG-IN Africa*. Available at: <http://unpan1.un.org/intradoc/groups/public/documents/cafrad/unpan021416.pdf>.

Table 2 Demographics of Kenya

Population: The country has a population of 39,802,000. The population mainly consists of Africans. The other races although in the minority are Indians and Arabs. Over the years, the population trends have changed and given rise to a youthful population structure which means that part of the population (44 percent) is those aged below 15years. ¹⁶⁵
Rural/Urban: The country has had an increase in rural to urban migration. As a result, 34 percent of the total population lives in urban areas mainly cities such as Nairobi, Kisumu and Mombasa. The rapid growth in urban population has led to an increase of informal settlements which do not have basic infrastructures hence limited access to ICTs. A significant proportion of the population 66 percent lives in the rural areas. ¹⁶⁶
Poverty levels and literacy: Kenya's economy has had a modest growth reaching an average of 2.9 percent. The governments' pursuit of a monetary policy is directed to achieve a sustainable growth in income and employment. Although the government projects a further growth in the economy the gap between the rich and poor is evident. Approximately 42 percent of the population is classified to be below the national poverty line. ¹⁶⁷ The country has a high literacy rate as an average of 85.1 percent of its population is literate.
Languages (official languages): Kenya has seven main ethnic groups; the Kikuyu, Luhya, Luo, Kalenjin, Kamba, Kisii and Meru. English is the official language while Swahili due to its historical and cultural significance is the official national language of the country. ¹⁶⁸

Source: Adapted from <https://www.cia.gov/library/publications/the-world-factbook/geos/et.html>

3.6.2 The State of ICTs in Kenya

According to the technology and creation index of the Human Development Report 2007/2008, Kenya is ranked 148th out of 177 countries globally with regard to internet usage.¹⁶⁹ The number of Internet users in 2009 stood at 3,359,600 people, and the internet penetration rate is at 8.6

¹⁶⁵ Encyclopaedia Britannica. Available at: <http://www.britannica.com/EBchecked/topic/315078/Kenya>

¹⁶⁶ Poff, M. E. 2007. *Country profile: The Republic of Kenya*.

Available at: <http://www.internationalstudies.ohio.edu/activities-outreach/files/Kenya.pdf> p. 7

¹⁶⁷ Ibid.

¹⁶⁸ Ibid., p.6.

¹⁶⁹ Human Development Report 2007/2008. *Fighting Development Report: Human Solidarity in a Divided World*. United Nations Development Programme. Palgrave Macmillan: New York. p.275.

percent of the population.¹⁷⁰ Of the total population, only .07 percent have fixed telephone lines, while 30.2 percent are cell phone subscribers. Internet subscriptions are 0.5 percent and Internet users is 8.0 percent. The percentage of those who own personal computers is only 1.4 percent. As such, the country's Internet usage is below that of South Africa but above that of Tanzania, Rwanda and Ethiopia.¹⁷¹

The total e-government web measure index is 0.30.¹⁷² The availability of the Internet is facilitated by the licensing of Internet Backbone Gateway Operators (IBGOs), Public Data Network Operators (PDNOs) and Local Loop Operators (LLOs). (See Annex 2).

3.6.3 E-Governance in Kenya

The state of e-governance in Kenya is still at an infancy stage. The country launched its national e-governance strategy in 2004 introducing its intent to initiate a government website. A national ICT policy was approved and made official in 2006.¹⁷³ The Ministry of Local Government is tasked with developing the country's e-governance strategy and must align the strategy with the national ICT policy. The aim has been to digitise some of the government's operations especially with regards to service delivery to make it more effective and efficient.¹⁷⁴ Figure 3.3 below illustrates the Kenyan government portal.

¹⁷⁰ Internet World Stats: *Internet Usage Statistics for Africa*. Available at: <http://www.internetworldstats.com>

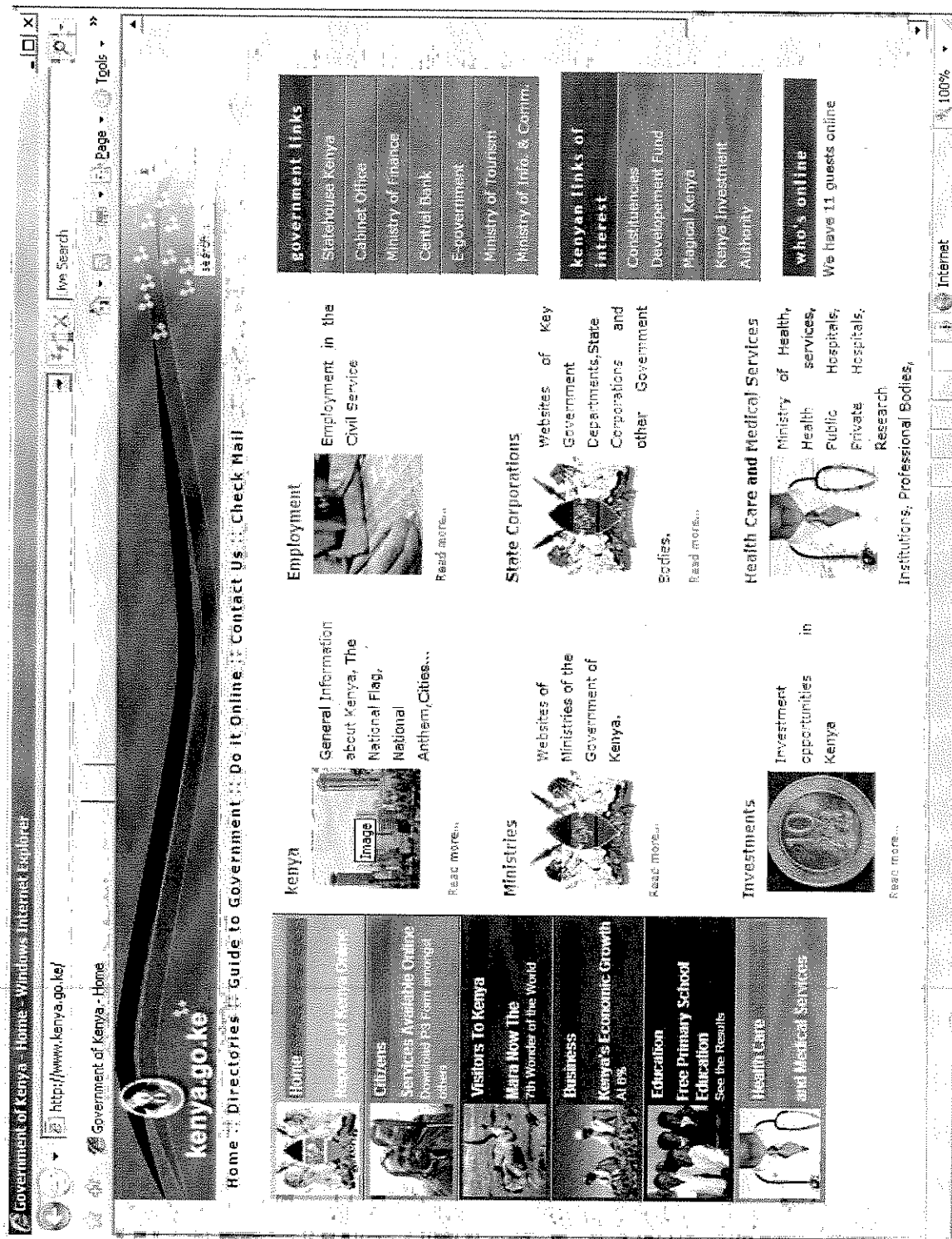
¹⁷¹ Mitullah, W.V. and Wamea, T. 2005. *Local Governance and ICTs Research Network for African LOG-IN Africa*. Available at: <http://unpan1.un.org/intradoc/groups/public/documents/cafrad/unpan021416.pdf>.

¹⁷² Information and Communication for Development 2009: *Extending Reach and Increasing Impact*. The World Bank: Washington, D.C. p.230.

¹⁷³ Ibid.

¹⁷⁴ Mitullah, W.V. and Wamea, T. 2005. *Local Governance and ICTs Research Network for African LOG-IN Africa*. Available at: <http://unpan1.un.org/intradoc/groups/public/documents/cafrad/unpan021416.pdf>.

Figure 3.3 Kenya's Portal Index Page.



Source: <http://www.kenya.go.ke/> (Accessed on 16th July 2010)

The Kenyan government's website offers G2C services through providing free access to official government documents, such as its constitution, policies, Bills and Acts. It also provides general information on Kenyan tourism and its economy. There are a couple of interactive public services offered to citizens, for example electronic applications and submissions of tax returns, vehicle licensing applications, passport applications, as well as pension and welfare benefit applications. There are a number of online discussion forums, and opportunities for complaints and/or feedback. However, the contact information provided is generic and limited to the general ICT secretariat of the Directorate of e-Government and not specific to any particular government official.

The respective government websites are user friendly. The contents and links are clear and well organised which ease navigation. The web content was up-to-date as per the last update which was on the 13th March 2010. It is generally well maintained. However, the website links to local municipalities were basic. It only provided general background information on urban municipalities, with no significant interactive public services while rural municipalities were not represented.

Mitullah and Wamea argue that the national government Department of Tax and Revenue has always faced an excess of backlogs. The Department apparently lacks adequate capacity to deal with the backlogs as well as with their current workload. However, the ability to submit tax returns online has sped up the administrative process resulting in the more efficient and effective administration of processing tax returns.¹⁷⁵ Both authors also highlight that similar benefits are experienced by other departments. For example, citizens are able to make online applications for welfare benefits and pensions which again speeds up the administrative process, with similar effects in terms of improving efficiency and effectiveness, as well as speeding up responsiveness.¹⁷⁶ These are examples of G2B and G2C e-governance service models, but it also assists G2G e-governance because it eliminates multiple application processes and consolidates data, making it readily available to other departments.

¹⁷⁵ Ibid.

¹⁷⁶ Ibid.

According to Kenya's Information and Communications Minister (Mr Poghiso), e-governance plays a key role in improving coordination and communication between internal government operations. The use of ICTs, such as the installation of one-on-one video links in the various government offices, facilitates communication between government officials. He claims that such technology has been used to link the Office of the President and the Office of the Prime Minister's, facilitating real-time communication and consultation which speeds up the decision making process. The use of such ICTs are not limited to internal departmental communication, but have also been put to use in international settings where government official liaise and communicate with international audiences. This allows for an exchange of ideas and/or information that can be useful in governance matters.¹⁷⁷

Kenya has an interesting online service aimed at fighting corruption. This e-governance service resonates with the elements of good governance such as those of accountability and transparency. Onunga identifies corruption as one of the biggest challenges that hinders the delivery of government services in the country.¹⁷⁸ The Information Technology Standards Association (ITSA) of Kenya has launched an Electronic Graft Management project to aid in the fight against corruption.¹⁷⁹ This programme includes discussion forums, contact information and email links that aim to create public awareness and participation in the fight against corruption. To facilitate this further, there is an Internet hotline that can also be accessed for the same purposes. This online service provides citizens direct access to report corrupt government practices.¹⁸⁰ The services offered in the Kenya Anti-corruption Commission webpage to fight corruption include an anonymous whistle blowing and an e-mailing system. (See Annex 8).

3.6.4 Kenya and the Digital Divide

Ndou mentions that one of the challenges facing the application of e-governance in Kenya is the lack of infrastructure and ICTs available to extend and widen access to online services, which

¹⁷⁷ Ongiri, I. 2008. *Getting Closer through Modern Technology*. The Standard Newspaper, Tuesday, 25th November. Available at: <http://www.eastandard.net/InsidePage.php?id=1144000107&cid=4&>.

¹⁷⁸ Onunga, J. (No date). *Kenya: Bursting Corruption Using the Internet*. Available at: <http://www.cddc.vt.edu/knownet/articles/kenya-case.html>.

¹⁷⁹ Ibid.

¹⁸⁰ Ibid.

indicative of a technological access divide.¹⁸¹ For instance, as Wamea and Mitullah found out, two of the country's municipal councils: Nyeri and Mavoko's application of e-governance proved to be problematic due to "lack of facilities for the public to electronically access the service."¹⁸² So, while the political will is there, the resources necessary to put this into effect are lacking.

Poff emphasises that the unequal distribution of income and education in Kenya hinders the implementation and application of e-governance in Kenya. He argues that although the government tries to reach out to the poor and illiterate, the majority continue to lack adequate access or even own ICTs such as computers. Many either live in rural, underdeveloped areas, while those in urban areas live in informal settlements. Neither possesses ICTs nor have access to the infrastructure necessary to utilise ICTs.¹⁸³

The language digital divide is apparent in Kenya. Despite the fact that the country has two official languages, English and Swahili, the language used on the government portal is English. The fact that English is the only language of interaction means that those who cannot read or write English are unable to make use of online e-governance services.

3.7 Tanzania

3.7.1 Historical Background

Tanzania is located in Eastern Africa, between Kenya, Uganda, Democratic Republic of Congo and Mozambique, along the Indian Ocean. (See Map 3.1). Tanzania has a political background of one-party rule sometimes referred to as nationalised social collectiveness-*ujamaa*, a "rural, collective village-based movement of African Socialism and Self Reliance". The political transition after the collapse of *ujamaa* and with that, one party rule, has introduced political pluralism. Tanzania is currently regarded as a liberal democracy. The country's political

¹⁸¹ Ndou, V. 2004. 'E-Government for Developing Countries: Opportunities and Challenges'. *The Electronic Journal on Information Systems in Developing Countries*, 18 (1), p. 24.

¹⁸² Mitullah, W.V. and Wamea, T. 2005. *Local Governance and ICTs Research Network for African LOG-IN Africa*. Available at: <http://unpan1.un.org/intradoc/groups/public/documents/cafrad/unpan021416.pdf>.

¹⁸³ Poff, M. E. 2007. *Country profile: The Republic of Kenya*. Available at: <http://www.internationalstudies.ohio.edu/activities-outreach/files/Kenya.pdf>

structure consists of a union government and a semi-autonomous Zanzibar government.¹⁸⁴

Amongst the reforms emanating from its political transition is decentralisation by devolution articulated in the 1998 Policy Paper on Local Government Reform. The goal is to establish an autonomous local government system that enhances transparency, accountability and public participation in governance and development issues.¹⁸⁵

Table 3 Demographics of Tanzania

Population: Tanzania has a relatively large population which consists of 40,213,160 people. The majority of the country's population are Africans with a small percentage of Arabs.
Rural/Urban: Although there is rural to urban immigration, the majority of the population 65 percent still lives in the rural districts compared as opposed to urban areas. ¹⁸⁶
Poverty levels and Literacy: Tanzania's economy is partly subsidised and has had a steady growth approximated at 5 percent in the last decade. Although the Tanzanian government has tried to address the country's poverty issues, the levels of poverty in the country are still regarded as high. ¹⁸⁷ The country's rate of literacy is 69.4 percent (of which males constitute approximately 77.5 percent and females 62.2 percent).
Languages (Official languages): Swahili is the official language and is widely spoken as opposed to English which is mainly used in commerce and administration. Arabic is also spoken but mainly in Zanzibar.

Source: Adapted from <https://www.cia.gov/library/publications/the-world-factbook/geos/et.html>

3.7.2 The State of ICTs in Tanzania

Tanzania's telecommunication infrastructure, much like the other four countries, can be categorised as being in a developmental stage. The government has acknowledged this and has responded by developing a telecommunications policy to facilitate improvement in this sector

¹⁸⁴ Dagne,T., Cook,N., and Reeves,H. 2007. Tanzania: Background and Current Conditions. *Report for Congress*. The Library of Congress. Available at: <http://www.fas.org/sgp/crs/row/RS22781.pdf> p.4.

¹⁸⁵ Njunwa, M.H.H. 2005. Strengthening Tanzania's Public Administration through Electronic Governance: Prospects and Problems. In Petroni, G. and Cloete, F. *New Technology in Public Administration*. International Institute of Administration Sciences. IOS Press. p. 144.

¹⁸⁶ Tanzania. Available at: <http://www.cet.uct.ac.za/files/file/tanzania.pdf>

¹⁸⁷ Cunningham, P. and Cunningham, M. 2006. *Comparative Report 2005. IST Africa: eGovernment, eHealth, Technology Enhanced Learning: Adoption in Mozambique, South Africa and Tanzania*. Available at: http://www.ist-africa.org/2005/files/IST-Africa_ComparativeReport_v1.0.pdf p.61.

and “formed an institutional framework to operate the liberalised and multi- operational telecommunication sector.”¹⁸⁸

The government has liberalised the telecommunication sector and allowed the private sector to enter the telecommunications field thereby expanding the country’s telecommunication infrastructure. In the technology diffusion and creation index based on Internet users, Tanzania is ranked 159th out of the 177 countries worldwide.¹⁸⁹ The number of those who use the internet is 520,000. The penetration of Internet is estimated at 1.3 percent of the population.¹⁹⁰ Only 0.4 percent of people have telephone lines, and only 20.6 percent are cell phone subscribers. Internet subscription and usage are both at 0.1 percent. The percentage of those who own personal computers is 0.9 percent. The e-government web measure index is 0.23.¹⁹¹ In short, the general state of ICTs in Tanzania is limited. (See Annex 3).

3.7.3 E-Governance in Tanzania

According to Menda, the adoption and utilisation of ICTs in the country is mainly undertaken by the private sector. Slow progressive steps have been taken by government to initiate e-governance. The focus has been to accelerate the G2G e-governance service model in order to improve and simplify administrative processes in the interest of improving efficiency and effectiveness.¹⁹² Tanzania’s government portal is named: *Official Online Gateway of the United Republic of Tanzania* (See Figure 3.4).

¹⁸⁸ *Telecommunications Sector Reform in Tanzania*. Available at: <http://finance.mapsofworld.com/economy-reform/tanzania/telecommunications.html>

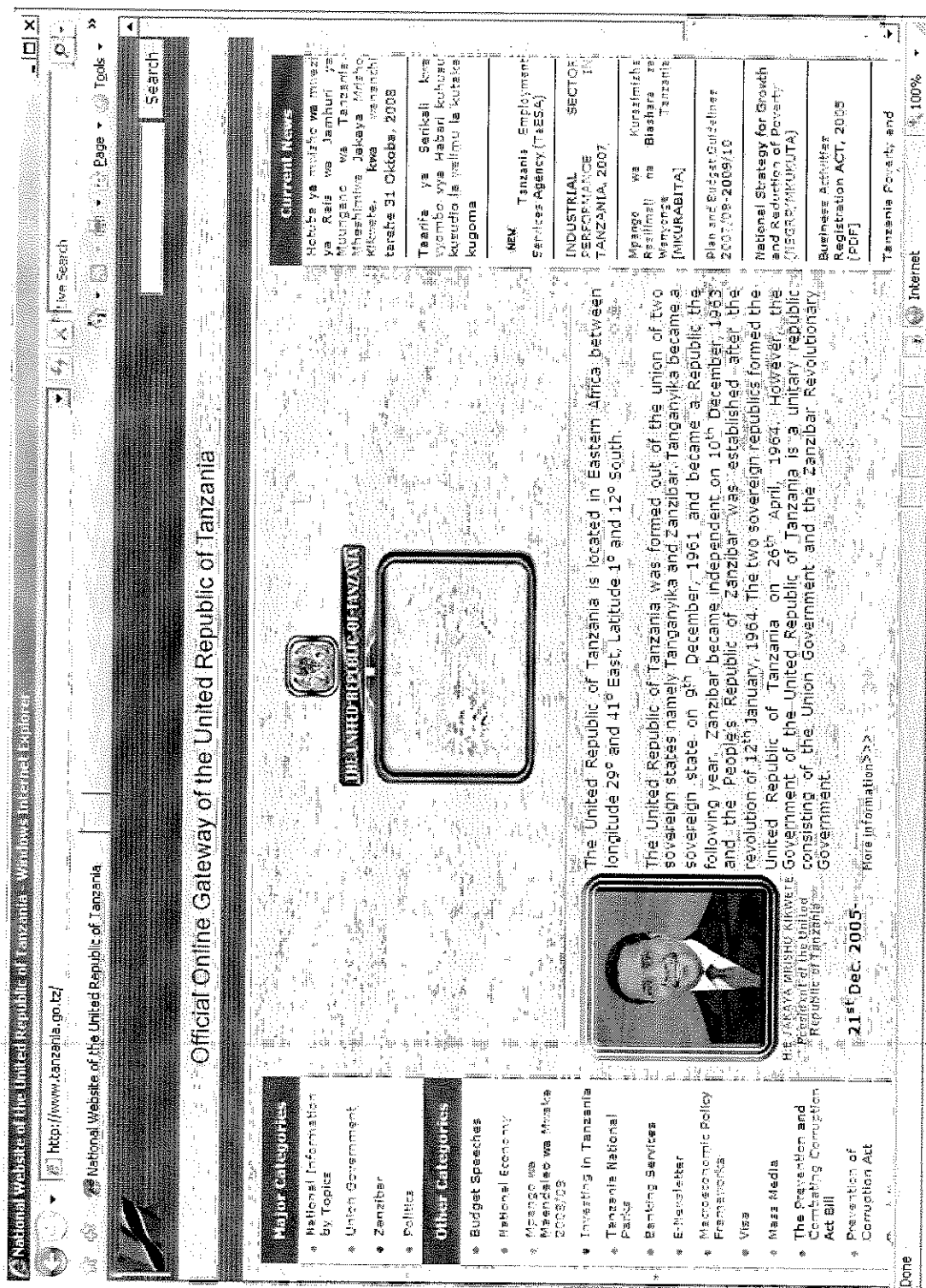
¹⁸⁹ Human Development Report 2007/2008. *Fighting Development Report: Human Solidarity in a Divided World*. United Nations Development Programme. Palgrave Macmillan: New York. p.275.

¹⁹⁰ Internet World Stats: *Internet Usage Statistics for Africa*. Available at: <http://www.internetworldstats.com/stats1.htm>

¹⁹¹ Information and Communication for Development 2009: *Extending Reach and Increasing Impact*. The World Bank. Washington, D.C. p. 291.

¹⁹² Menda, A. 2005. *Successes and Challenges: E-Governance in Tanzania*. Available at: <http://www.i4donline.net/dec05/knowledge.pdf> p.34.

Figure 3.4 Tanzania's Portal Index Page



Source: <http://www.tanzania.go.tz/> (Accessed on 14th July 2010)

The non-interactive public services that the website offers as part of G2C e-governance include national information on the country, budget speeches, newsletters, policy frameworks on various economic aspects of the country, Bills and Acts. It provides a few interactive G2C e-governance services such as visa applications, license applications, job applications, feedback and comment as well as an e-mail contact address. However, the contact details on the main website are all the same general departmental address and do not go directly to any government official. The main government portal provides links to the different government ministries. The respective web pages of the different government ministries provide general information such on the services offered by each ministry, and access to departmental reports and tenders. There are no links to any specific municipalities but to the country's regions which only offer general information about each region.

The websites are in both official languages of the country namely English and Swahili. The website is navigable and the links operative. The frequency by which the website is updated and maintained is questionable as the only date that appears to show this is 21st December 2005. Despite these, it is worth mentioning that the language and layout of the website is predominantly English, even though the Swahili language is more widely spoken. Despite the above, some of the progress made in the application of e-governance to improve service delivery is worth mentioning as discussed below.

Menda points out that the government continues to prefer applying the traditional manual means for the provision of most of its services, and criticises that this remains inefficient and ineffective. The manual administrative processes result in public services remaining slow, and he contends that it enables government officials to continue to capitalise on this for corrupt gains.¹⁹³ For instance, to get bribes some government officials in the processes of issuing of business licenses have enriched themselves with bribes. In this case, the lack of transparency has proved the provision of this service both inefficient and ineffective. Often business owners have had to bribe the officials in charge of the application and acquisition processes to get new licenses or renew old ones.¹⁹⁴ With the application of G2B e-governance, the Kinondoni Municipal Council is able to provide new licenses or renew old ones online and thereby improve the rate of

¹⁹³ Ibid.

¹⁹⁴ Ibid.

efficiency and effectiveness of the way licences are issued out. Menda has argued that business owners are now able to easily process their licenses within a day. The lack of direct contact between the business owner and the government official reduces the chances of an official to use his or her discretion to manipulate the situation for the purposes of self gain.¹⁹⁵ Additionally, e-governance has also proved beneficial in the management and organisation of internal government operations – a form of G2G. According to Coleman, through the use of ICTs and some of its application that enables data capturing, storage and retrieval, the government has been able to put online a payroll and human resources system. The system has a database that covers 280,000 civil servants. Coleman argues that this has been a good means to organise and manage such information for the purposes of payment, record keeping and monitoring other employment issues. The result has been more efficient management of government employees.¹⁹⁶ (See Annex 9).

3.7.4 Tanzania and the Digital Divide

Njunwa highlights that the implementation and application of e-governance in the country has been faced by some challenges. Amongst these include the fact that although a majority of the citizens are motivated to use e-governance services, they are faced with the challenge of limited accessibility.¹⁹⁷ He argues that while accessibility is possible to those in the urban areas, those in the rural areas are “cut out of the access perimeters”. As such there is an urban to rural access divide. He attributes this to inadequate telecommunication infrastructure (indicating a technological access divide) as well as lower literacy rates (typical of the education access divide) in these areas compared to the urban areas.¹⁹⁸

Tanzania has made a considerable progress in the development of ICTs with regards to implementing e-governance. The government places an emphasis on the implementation and application of e-governance in public service delivery to promote efficiency towards good

¹⁹⁵ Ibid.

¹⁹⁶ Coleman, S. (No date). *Africa E-governance—Opportunities and Challenges*. Available at: http://www.commissionforafrica.org/english/report/background/coleman_background.pdf

¹⁹⁷ Ibid.

¹⁹⁸ Njunwa, M.H.H. 2005. “Strengthening Tanzania’s Public Administration through Electronic Governance: Prospects and Problems.” In Petroni, G. and Cloete, F. *New Technology in Public Administration*. International Institute of Administration Sciences. IOS Press. p.150.

governance. Nevertheless, like its counterparts elsewhere, the application of e-governance is to an extent limited by factors such as poor ICTs infrastructural distribution and low literacy rates.

3.8 Rwanda

3.8.1 Historical Background

Rwanda is a land-locked country located in central Africa. It is bordered on the South by Burundi, North by Uganda, West by Tanzania and East by the Democratic Republic of Congo. (See Map 3.1). After attaining its independence in 1962, Rwanda was characterized by a highly centralised state. The decision-making powers and the country's resources were in control of the central government. The political environment that emerged ended up creating inefficiencies in service delivery and created a passive attitude from the populace with regards to civil responsibilities.¹⁹⁹

The 1994 genocide became a turning point for the country's social, economic and political spheres. The poor state of affairs in public structures of governance led the government to look into newer ways of managing such.²⁰⁰ One of the means to achieve this has been through policies such as the National Decentralization Policy officiated in May 2000. Some of the main objectives of the policy included to promote and ensure citizen participation at the local level in decision-making in civic affairs. It also aimed to strengthen the link between communities and local authorities towards responsibility and accountability.²⁰¹

¹⁹⁹ Republic of Rwanda.2005. "Ministry of Local government, Good Governance, Community Development and Social Affairs and Ministry of Finance and Economic Planning." December. p.5.

²⁰⁰ Ibid.

²⁰¹ Ibid., p.6

Table 4 Demographics of Rwanda

Population: Rwanda has a population of 10,186,063. It is a small densely populated country with a rapid growing population since the genocide in 1994. The population mainly consists of Africans and the average age is 21 years.
Rural/urban: The average percentage of those who live in the urban areas is 18 percent with an increase of 7.3 percent annually. Part of this (72 percent) are slum dwellers. The rest of the population live in rural areas. Similar to its counterpart such as Kenya, the slum dwellers and those who live in the rural areas have poor or underdeveloped infrastructure. ²⁰²
Poverty levels and Literacy: The Rwandan economy largely depends on agriculture. Following the genocide and conflicts associated with it, the country has made an economic recovery from a low base. Over the years, the GDP has grown annually at 10 percent although an estimate of the population that lives below the poverty line is 63 percent. The country has a literacy level of 70.4 percent. ²⁰³ (Male, 76.3% and Female 64.7%).
Languages (Official languages): The country's official languages are Kinyarwanda, French, and English. Swahili is also used but in commercial centres.

Source: <https://www.cia.gov/library/publications/the-world-factbook/geos/et.html>

3.8.2 The State of ICTs in Rwanda

The country's telecommunication infrastructure was severely damaged by the 1994 genocide. It is now at a developmental stage, making slow but steady progress since 2000. Within the technology diffusion and creation index based on Internet users, Rwanda is ranked at 161th out of the 177 countries worldwide.²⁰⁴ It is estimated that 300,000 (or 1.1 percent) use the Internet, and the penetration of Internet is at 2.8 percent of the population.²⁰⁵ Only 0.2 percent of people have telephone lines, while 6.5 percent are cell phone subscribers. Internet subscription remains low at

²⁰² Population Reference Bureau and African Population Health Research Center. 2008. *Africa Population Data Sheet*. Available at: <http://www.prb.org/pdf08/africadatasheet2008.pdf> p.5.

²⁰³ Ministry of Finance and Economic Planning 2007. *The Republic of Rwanda: The Economic Development and Poverty Reduction Strategy. 2008 – 2012*. Available at: http://planipolis.iiep.unesco.org/upload/Rwanda/Rwanda_EDPRS_2008-2012.pdf p.7.

²⁰⁴ Human Development Report 2007/2008. *Fighting Development Report: Human Solidarity in a Divided World*. United Nations Development Programme. Palgrave Macmillan: New York. p.275.

²⁰⁵ Internet World Stats: *Internet Usage Statistics for Africa*. Available at: <http://www.internetworldstats.com/stats1.htm>

0.1 percent with only 0.3 percent of the population owing personal computers. The e-government web measure index is 0.17.²⁰⁶ (See Annex 4).

3.8.3 E-governance in Rwanda

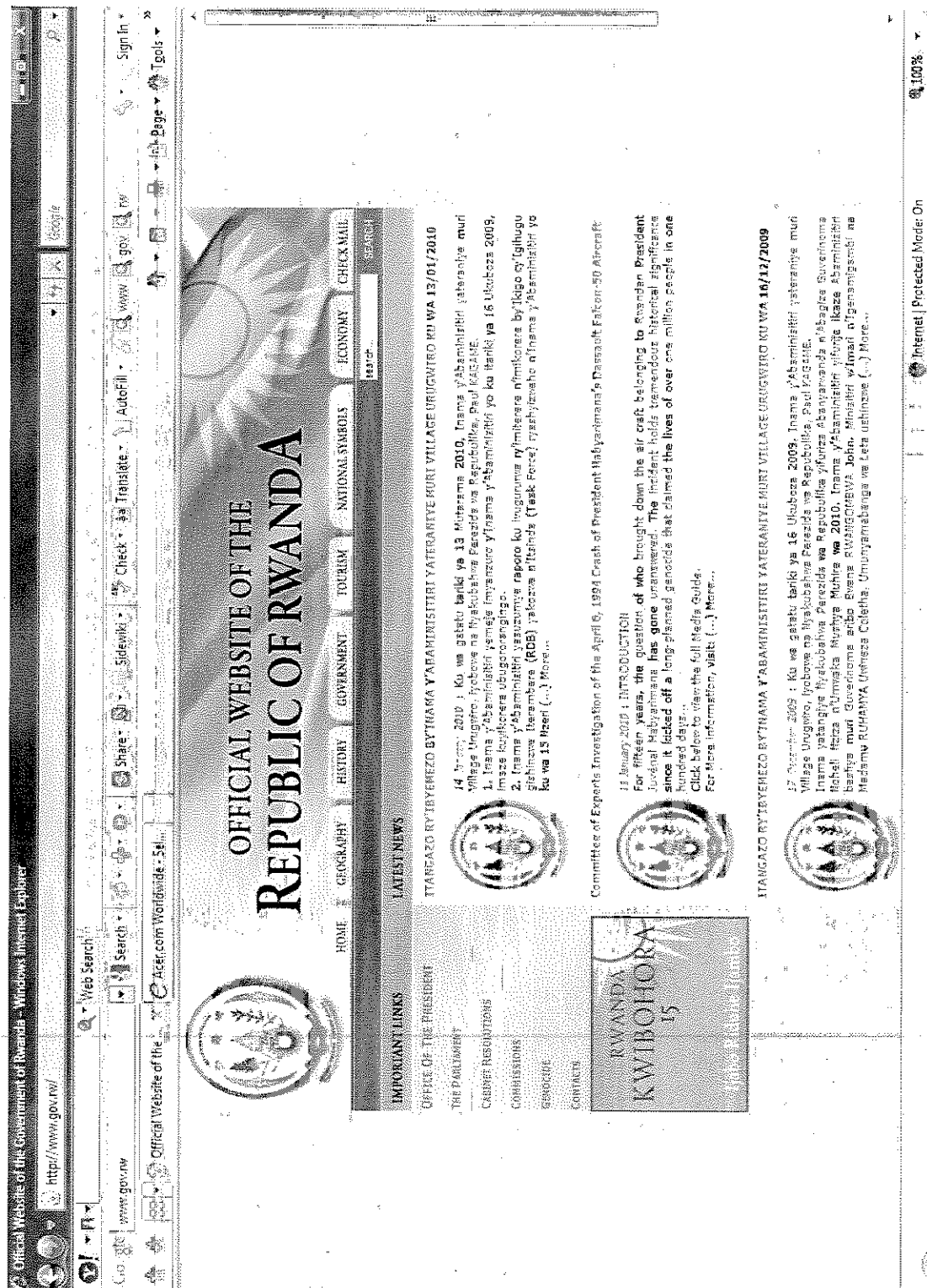
The Rwandan government formulated and adopted a national ICT policy in 2000 that indicated a national commitment to promote and facilitate the use of ICTs in the provision of public services. The Rwanda Information Technology Authority (RITA) was established to assist government for this purpose.²⁰⁷ The implementation of e-governance in the country has been undertaken by a project facilitated by the Rwandan government in partnership with the European Commission (EC) and the International Telecommunication Union.²⁰⁸ The government's official portal is called the *Official Website of the Republic of Rwanda* (see Figure 3.5 below).

²⁰⁶ Information and Communication for Development 2009: *Extending Reach and Increasing Impact*. The World Bank. Washington, D.C. p. 273.

²⁰⁷ Kitaw, Y. 2006. *E-Government in Africa: Prospects, Challenges and Practices*. Available at: http://www.friends-partners.org/GLOSAS/Global_University.

²⁰⁸ Ibid.

Figure 3.5 Rwanda's Portal Index Page.



Source: <http://www.gov.rw/> (Accessed on 14th July 2010)

The Rwandan government portal offers access to general information, and provides some kind of G2C e-governance delivery model. Information is available on the country's political, socio-economic situation as well as more general information on tourism opportunities. In addition to this, the website offers two interactive public services which include visa applications and e-mail contact information of the government. The contact information is general. For example, the telephone number, email address and fax number offered are all directed to the Office of the President under the Office of the Prime Minister. The government portal does not have any links to provincial or local governments.

The dominant language used on the website is English with a few websites in French and Kinyarwanda. One of the website's weaknesses is that while the front page appears satisfactory, it is not very user friendly. The website's layout and organisation of content is disorganized. There is poor navigation and many of the links are not operative. The website does not indicate any date of update. The only date that appears on it is the year of which it was started.

The Ministry of Home Affairs offers online visa applications. According to Kitaw, the ability to apply for visas online has been a significant service, receiving on average 30 applications per day. The service provided together with this includes a "biometric data collection system to capture and store fingerprints."²⁰⁹ Kitaw emphasises that the whole application procedure is done online and is facilitated with a work flow between the Kigali International Airport and the Immigration Department, both government agencies. This is an example of G2G as well as G2C e-governance. In this context, e-governance has allowed for increased convenience based on the fact that the provision of this service can be accessed from an alternative point. This saves on time as well as costs that are incurred more in manual processes of visa processing in terms of congestion and paperwork, speeding in house public administration.²¹⁰ (See Annex 10).

3.8.4 Rwanda and the Digital Divide

Rwanda faces challenges of the digital divide. For example, regarding the technological access divide, most of the technology is based in the capital city, Kigali, with little in other parts of the country. The rate of internet penetration is to a large part limited due to lack of access to

²⁰⁹ Ibid., p.27.

²¹⁰ Ibid.

computers. This problem is further worsened by a shortage in basic infrastructure such as electricity. ICTs need connectivity and supply of electricity. The poor and underdeveloped infrastructure in the slum areas as well as the rural areas explains the low levels of telecommunication penetration. The majority of access to ICTs is in urban areas.²¹¹ This highlights the presence of the urban-rural access divide.²¹²

As highlighted before, Internet usage needs a certain level of literacy and ICT competencies. The higher levels of literacy are mainly in the urban areas compared to the lower levels in the rural areas which indicates an education access divide.

Gillward mentions that the imbalance that exist between those who are rich and those who are poor (the income-access divide) affects the rate at which ICTs are acquired and used.²¹³ Gillward has argued that Internet access and penetration has increased more in the urban areas especially through cyber cafes as a majority of the people are not able to afford computers and internet services in their homes. The high cost of ownership of ICTs and personal subscription to using the services they offer means that those who cannot afford private access remain marginalised and can therefore not benefit from e-governance.²¹⁴

3.9 Ethiopia

3.9.1 Historical Background

Ethiopia is located in the horn of Africa bordered by Djibouti to the northeast and Eritrea to the north. (See Map 3.1). Ethiopia is a federal democracy, having adopted a new constitution to formulate a new government in 1994. The Federal Democratic Republic of Ethiopia was formed in 1995, after 17 years of military dictatorship and ethnic politics that constantly facilitated

²¹¹ Gillward, A. 2005. *Towards an African e-Index: Household and Individual ICT Access and Usage across 10 African countries*. Available at: <http://link.wits.ac.za/papers/gillwald-et-al-2005-final-e-index.pdf> P. 127.

²¹² Ibid., p.128.

²¹³ Ibid., p.121.

²¹⁴ Ibid., p.121.

conflicts and civil wars. A parliamentary election held in 2005 ushered in a new era on the country's path to democracy.²¹⁵

Table 5 Demographics of Ethiopia

Population: The country is the second highest populated in the African continent with a total of 82,544,840 people.
Rural/Urban: Ethiopia remains amongst the least urbanised countries in the world. The urban population is at 16 percent of which 82 percent live in slum dwellings. The majority of the population live in the country's highland areas practising subsistence farming. ²¹⁶
Poverty levels and literacy: Ethiopia experiences mixed and highly variable economic growth. This is primarily because Ethiopia's main economic activity is agriculture. This sector is highly affected by the fluctuation in natural environmental situations such as drought, which decreases economic activity, but then increases again once the rainy season begins. It is also amongst the least developed countries in the world. ²¹⁷ At an average of 59 percent, the country records a lower literacy rate of the adult population who can read and write. (Of which 50.3% are Male and 35.1% are Female).
Language (official languages): The country's official language is Amharic while others such as Oromigna, Tigrinya, Somaligna, Guaragigna are commonly spoken. English is taught as a foreign language in most schools in urban areas.

Source: <https://www.cia.gov/library/publications/the-world-factbook/geos/et.html>

3.9.2 The State of ICTs in Ethiopia

The country's telecommunication infrastructure capacity is regarded as being among the lowest on the continent despite the fact that the country was the first to have telecommunication operations in Africa. (This being introduced in 1894). According to the Telecommunications Infrastructure Index it is ranked at 169th out of the 177 countries around the world regarding the

²¹⁵ Hagmann, T. and Khalif, M.H. 2006. 'State and Politics in Ethiopia's Somali Region Since 1991'. *Bildhaan: An International Journal of Somali Studies*.6: 25-49.p.2.

²¹⁶ Population Reference Bureau and African Population Health Research Center. 2008. *Africa Population Data Sheet*. Available at: <http://www.prb.org/pdf08/africadatasheet2008.pdf> p.5.

²¹⁷ Ibid., p. 5.

amount of internet users.²¹⁸ Gillwald raises the point that the country's telecommunications sector is characterised by poor provision of these services.²¹⁹ The telecommunication operations are managed by the Ethiopian Telecommunications Corporation (ETC). This is an independent regulator and has total monopoly over telecommunications in the country and operates in a weak, regulatory framework.²²⁰ The number of Internet users in 2009 was a meagre 360,000 people, with a penetration rate of only 0.4 percent of the population.²²¹ However, this must be viewed in line with the facts that only 1.1 percent of the population have telephone lines and only 1.5 percent of the population are cell phone subscribers. The amount of people who own personal computers is as low as 0.7 percent. The e-government web measure index is 0.17.²²² In short, the prospects of e-governance in Ethiopia are currently negligible. (See Annex 5).

3.9.3 E-governance in Ethiopia

Kitaw notes that, despite Ethiopia's low state of ICT usage, the government is keen to "consider ICTs as an indispensable tool to alleviate poverty and facilitate a state-transformation aiming for an effective and efficient service delivery."²²³ The government has under the Ministry of Capacity-Building established the Ethiopian Information and Communications Technology Development Agency (EICTDA) to facilitate the development of ICTs. In contrast to the other four countries discussed in this chapter, the Ethiopian government does not operate an official government portal, however, it appears as if steps are being taken towards this. For example, the implementation of e-governance in Ethiopia has become a national project under the national

²¹⁸ Human Development Report 2007/2008. *Fighting Development Report: Human Solidarity in a Divided World*. United Nations Development Programme. Palgrave Macmillan: New York. p.275.

²¹⁹ Gillwald, A. 2005. *Towards an African e-Index: Household and Individual ICT Access and Usage across 10 African countries*. Available at: <http://link.wits.ac.za/papers/gillwald-et-al-2005-final-e-index.pdf> p.66.

²²⁰ Demeke, M. And Biru, T. 2002. *ICT Penetration and Usage in Ethiopia: Baseline Study*. Available at: <http://www.uneca.org/aisi/ScanGhana/Documents/3.SCAN%20ICT%20ETHIOPIA%20.pdf> p. v.

²²¹ Internet World Stats: *Internet Usage Statistics for Africa*. Available at: <http://www.internetworldstats.com/stats1.htm>

²²² Information and Communication for Development 2009: *Extending Reach and Increasing Impact*. The World Bank. Washington, D.C. p. 203.

²²³ Kitaw, Y. 2006. *E-Government in Africa: Prospects, Challenges and Practices*. Available at: http://www.friends-partners.org/GLOSAS/Global_University.

ICT4D Action Plan. This incorporates setting up an IT network in order to organise and implement projects such as Woreda-Net and School-Net.²²⁴

Woreda refers to local government or an administrative sub-division. Amongst the main objectives of the Woreda-Net project is to network (or link-up) the different government administrative zones to promote effectiveness and efficiency in public service delivery. The application of Woreda-Net enables G2G operations in the delivery of services. This includes the use of the following:²²⁵

- Web Services: a series of web servers and pages that gives civil servants access to restricted government information on the Internet on key issues such as governance, health, education and agriculture.
- Video Conferencing: a service that allows broadcasts of recorded sessions and programs to remote Woredas.
- Messaging: an electronic messaging environment that government employees use for a free flow of e-mail messages via a secured and organised IT framework.

Kitaw contends that Woreda-Net has significantly contributed to the efficiency of the government at the various local, regional and federal levels. For example, it has resulted in the establishment of a web-based information gateway (referred to as Woreda Information Systems) which is aimed at enhancing the responsiveness, efficiency and effectiveness of government administration through enabling online communication and information-sharing between the local government administrators, regional directors and the federal government officials.²²⁶

The web services, video conferencing and messaging are believed to have increased the dissemination of information and thereby enabling faster decision making. It has reduced time in travel and administrative costs on paperwork in manual management in internal government

²²⁴ Tessema, A. A. 2008. *Federal Democratic Republic of Ethiopia*. Available at: <http://www.eicda.gov.et/tender-network.htm>.

²²⁵ Ibid.

²²⁶ Kitaw, Y. 2006. *E-Government in Africa: Prospects, Challenges and Practices*. Available at: http://www.friends-partners.org/GLOSAS/Global_University

communication.²²⁷ As such, it has already contributed to making governance in Ethiopia more responsive, efficient and effective.

The other government supported ICT project is called School-Net. Its objective is to extend high school tuition to outlying (often rural) areas where teachers are lacking. School-Net represents the G2C e-governance delivery model. According to Kitaw, School-Net has already connected 550 high schools through “VSAT based broadband” to deliver video-based distance education. To a great extent, this aids the government to deliver basic education services to those in rural areas.²²⁸ Despite the shortage of teachers, the government is still able to deploy education services directly to such areas.²²⁹

There was no evidence of on-line services available for businesses, such as any internet applications related to tax return, renewal of licensing, or other business-related applications. It is therefore concluded that Ethiopia has no G2B e-governance delivery model.

3.9.4 Ethiopia and the Digital Divide

The limited application of e-governance delivery models are significantly influenced by the technological access divide closely related to the urban-rural access divide. Shiferaw mentions that access to technology is especially prevalent in rural areas. The state of ICTs in Ethiopia illustrates that internet penetration is weak overall, but especially in rural areas generally due to the absence of ICT infrastructure.²³⁰ The use of ICTs remains limited to traditional means such as radio, print and television (for those who can afford it).

The challenge facing the use of ICTs in Ethiopia includes each of the digital divides, and highlights the interrelatedness of the respective divides. For example, Ethiopia has low levels of literacy (59% are regarded as literate). This results in many people not having the necessary competence or skills (such as command of the English language) to make use of ICTs even if

²²⁷ Ibid.

²²⁸ Kitaw, Y. 2006. *E-Government in Africa: Prospects, Challenges and Practices*. Available at: http://www.friends-partners.org/GLOSAS/Global_University

²²⁹ Cross, M. 2005. *Ethiopia's Digital Dream*. The Guardian, Thursday, 2005. Available at: <http://www.guardian.co.uk/technology/2005/aug/04/onlinesupplement>

²³⁰ Shiferaw, A. 2008. *Connecting Telecentres: An Ethiopian Perspective*. Available at: <http://www.telecentremagazine.net/articles/article-details.asp?Title=Connecting-Telecentres:-An-Ethiopian-Perspective&articleid=163&typ=Features>

access was available. A lack of education translates in a lack of formal employment opportunities. This then introduces an income and education access divide.²³¹

Despite the low state of ICT availability, compared to the other four countries, the Ethiopian government is actively pursuing e-governance. It is important to bear in mind that Ethiopia has only become a fully-fledged democracy since 2005. Gillward has pointed out that the Ethiopian government has taken increasing steps in a short period of time towards e-governance. It is currently venturing into partnerships with a number of non-governmental organizations, and the World Bank to help with implementation and funding.²³² If this continues, it bodes well for good governance.

Conclusion

The following chapter will provide the findings and analysis of the case study and will conclude the thesis. It will explore the implications of the shortcomings experienced by the respective countries and consider the impact thereof on applying e-governance in countries that face similar challenges as the five countries described in this chapter.

²³¹ Gillward, A. 2005. *Towards an African e-Index: Household and Individual ICT Access and Usage across 10 African countries*. Available at: <http://link.wits.ac.za/papers/gillwald-et-al-2005-final-e-index.pdf> p.72

²³² Ibid.

Chapter Four: Findings and Analysis

4.1 Introduction

This chapter presents the findings and analysis of the study and reflects on the relationship between e-governance and good governance based on the research findings emanating from the case study. The findings will be summarised into three different tables. Table 4.1 will reflect on the types of e-governance in each of the five countries. Table 4.2 will consider whether or not the use of ICTs in the respective countries can promote good governance. Table 4.3 identifies the six respective digital divides and considers whether these are evident in any of the five countries.

4.2 Findings

Table 4.1 below indicates that each of the five countries, except Rwanda and Ethiopia exhibited the three delivery models of e-governance. Ethiopia is the only country that does not provide online government-to-business services.

Table 4.1 Types of E-governance

	South Africa	Kenya	Tanzania	Rwanda	Ethiopia
G2G	Yes	Yes	Yes	Yes	Yes
G2B	Yes	Yes	Yes	No	No
G2C	Yes	Yes	Yes	Yes	Yes

While the three delivery models of e-governance are applicable in South Africa, Kenya, and Tanzania, each country remains limited in applying the models fully. The G2C e-governance remains predominantly a one-way model. Most portals provide generic contact generic information as opposed to those of a particular government official. The given email addresses are centralised and the telephone numbers go through a common departmental switchboard which is not conducive to direct interaction or specific feedback. Citizens can pay bills, taxes and other utility accounts online, but cannot view account statements. Online applications (such as

passport or visa applications) can be made but there is no feedback or opportunity to track progress. As such, G2C and G2B remain one-way and not interactive.

Each of the five countries applied the G2G model and this proved to be the main rationale for introducing e-governance. However, on closer examination, many of the supposed links were inoperative. Especially the links on the Rwandan government portal. Those that have accessible links are links to local governments. Many local government websites offered minimal information. The better ones (South Africa and Kenya) offered information on legislation, draft bills, public statements, reports and tender notices. Although the information is meant for both the public and government officials, networking between government officials is not really viable. The poor linkage between government departments or municipalities does not provide a ground for adequate networking.

Similar to the G2C, G2B which mainly offers e-services such as licensing application and tender notices do not need much interaction thereby limiting the rate in which government can be involved with the citizens.

Table 4.2 The Use of ICTs to Promote Good Governance

	South Africa	Kenya	Tanzania	Rwanda	Ethiopia
Public Participation	No	No	No	No	No
Representativeness	No	No	No	No	No
Responsiveness	Yes	Yes	Yes	Yes	No
Accountability	No	Yes	No	No	No
Transparency	No	Yes	No	No	No
Efficiency	Yes	Yes	Yes	Yes	No
Effectiveness	Yes	Yes	Yes	Yes	No

All the countries except Ethiopia provide online access to services such as tax returns, electricity bills payment, license and passport application, general information, data as well as contact details. The assumption is that these can be interactive based on the way they are accessed. This is not true as although they may appear to be interactive, they are not. The access of these services shows no real interaction. Services such as paying of bills, passport and license application can simply be accessed and used without much interaction going on. The discussion forums aimed at participation only enable citizens to engage with other citizens and not the government. Furthermore, the answers to some of the questions raised in the discussion forums are to be in definite forms of either YES or NO. The general information, data and contact information only enables a one way interaction. The lack of services such as online voting, referendums together with direct and effective contact details means therefore that e-governance in this context is only one way as opposed to two way.

Table 4.2 above indicates that e-governance does not currently promote public participation in any of the five African countries examined. Public participation via e-governance needs to be able to bring decision-making closer to the people. Although the citizens can vote and enhance accountability through the vote, there have to be other opportunities to make their voices heard. This means ensuring a freer flow of information between government and citizens, to promote active participation and direct engagement in public decision-making processes in services provision.

For instance, in South Africa the interactive public services available online are electronic submission of tax returns, payment of licences, discussion forums and passport applications. These are mainly services that enable the public to make utility bills payments and document applications. Although these services allow interactivity in one way, they are not channelled to provide opportunities for the public to become involved or engage with the government in for example, decision-making processes. Apart from offering similar services the other countries, Kenya and Tanzania also offer complaints and feedback services which on the other hand, if well developed, can encourage and facilitate significant public participation.

With regards to representativeness, Table 4.2 shows that none are significantly representative of the population as a whole. Most websites were English, with a few countries having other language options. Representativeness is also about the ability to mediate or promote dialogue on

conflicting interests of the public accommodated based on for example minorities, culture and gender amongst others. There are no specific or direct links to allow publicly elected government officials to directly or indirectly act as a link between the people and the government, in matters of governance. The available discussion forums and blogs in the countries' websites do not allow for meaningful and interactive discussion that can create a forum to represent the majority through those that they have elected.

As a characteristic of good governance, accountability means that the government as a main decision maker is accountable to the public. Table 4.2 indicates that only one out of the five countries in the case study, Kenya, has shown the intent of making government officials accountable by trying to ask citizens to actively participate in whistle blowing especially on corrupt practices. While some other countries, like South Africa, make reference to anti-corruption initiatives, this is not part of the national government portal. Whereas in Kenya, corruption has been identified as one of the biggest challenges hindering delivery of government services. In its case, the Information Technology Standards Association (ITSA) of Kenya launched an Electronic Graft Management project to aid in the fight against corruption. The online services in the project such as mainly, contact information and email links together with an Internet hotline works to create public awareness and response in the fight against corruption and is a move towards good governance.

With regard to transparency, Table 4.2 illustrates that only two countries (Kenya and Tanzania) have made online services available to enable checks against mismanagement and corruption. An electronic-embedded decision-making system can promote transparency when supported with a standardised online routine provision of services. The assumption here is that this can reduce the discretion of government officials that is often used to manipulate the way public services are provided. For instance, the online provision of some of the public services such as paying of licences and tax as well as the application of passports and visas by countries such as Kenya and Tanzania has to an extent enabled the above. For instance, in Tanzania, the online issuance of business licences has reduced the direct contact between business owners and government officials. The online procedure in the provision of such a service means that government officials have reduced chances of using their discretion to practice corruption. It is rather of importance to

mention that although e-governance cannot alleviate the main structural factors that breed corruption, its strategic implementation can improve the important variable in fighting the vice.

According to the Table 4.2, each of the five government portals promote efficiency as a characteristic of good governance. Some attributes of efficiency displayed in the countries in e-governance include steps towards cutting costs and improving the speed of service delivery. This report has referred to a number of studies that indicate that the implementation of e-governance models has improved internal administration through G2G e-governance service models. As the research has established, the online provision of public services can enhance efficiency. The online application of some of the services means an upgrade of manual operations to automated operations which can save precious resources such as time and money. In South Africa, efficiency in the justice administration has been improved with the automation of case application processes online. This means that the once slow manual processing of documents is now faster and the cost of resources that was used in manual processing has also been reduced.

Table 4.2 also shows that all the countries have made the effort to promote effectiveness. The basis of this can be looked at with regards to the ease of access to the service, integration of services that enable access to several other services through one request, and mechanisms that can help to resolve problems. For example, of the five countries discussed, South Africa, Kenya and Tanzania have made an attempt to align some of the public services to their citizen's requirement. For those who have access, the online application of these services such as paying of bills, license and visa application can be a convenience. The design of services around user's requirements such as incorporating the use of local language(s) can make the process of accessing some of the services easy and time saving. However, e-governance can be conclusive to fostering good governance in each of the five countries, the reality of the digital divide is prominent in the five countries.

Table 4.3 Digital Divides

Each of the countries share similar demographic profiles, such as high illiteracy rates, high levels of unemployment and poverty rates which are all more prominent in underdeveloped rural areas. This means that the application of e-governance faces some key barriers.

	South Africa	Kenya	Tanzania	Rwanda	Ethiopia
Technological access divide	Yes	Yes	Yes	Yes	Yes
Income access divide	Yes	Yes	Yes	Yes	Yes
Education access divide	Yes	Yes	Yes	Yes	Yes
Urban-Rural access divide	Yes	Yes	Yes	Yes	Yes
Telecommunication access divide	Yes	Yes	Yes	Yes	Yes
Language access divide	No	Yes	No	No	Yes

Table 4.3 illustrates that all the countries have digital divides which are integrally linked to each other. For example the lack of telecommunication is more prevalent in less educated, less wealthy and rural areas where English is not the main language and where infrastructure is lacking.

In all the countries discussed, English appears to be the dominant language in the application of e-governance. This is despite the fact that most of these countries have official languages other than English. A case in point is the Kenya's government portal which has only been made available in the English language. Those who cannot read, write or understand the English language cannot make use of the services offered online.

4.3 Conclusion

This study has revealed that the difficulty in implementing and applying measures of e-governance in the five countries can be attributed to the widespread prevalence of the digital divides. This study concludes that the digital divides are a severe hindrance to the promotion of good governance through e-governance. If the digital divides are not addressed, then the marginalization between those who have access and those who do not will continue. This will hinder the realization of the potential of e-governance. These predominantly include poor spread of technological and telecommunication infrastructure especially in the rural areas, where the majority of poor illiterate people live.

These barriers can be of significance but with the rapid advancement of ICTs and continuous nascent nature of e-governance, the progress the countries in discussion have made shows that the implementation and application of e-governance is and will be a continuous process. With time, the state of e-governance may therefore improve.

The study reveals that although e-governance has contributed to the provision of public services in each of the five countries examined, it is also clear that these countries do not yet have the capacity to provide e-governance in a manner that will meet all the criteria of good governance. It is important to point out that e-governance is not meant to replace traditional forms of governing, but it is regarded as a valuable tool or aid that can assist governments to provide public services in a more efficient and effective manner.

Although e-governance has been promoted as an initiative to improve public service delivery, it is not an end but rather a possible means to an end to improve service delivery. The overall implication for the use of ICTs in governance can be of some benefit in enhancing the requirements of good governance. Widening the application of ICTs has contributed to highlighting some of the key service delivery challenges facing governments and their administrations and enables them to question their own structures and procedures.

Widening the use of, and access to ICTs remains the cornerstone in the 21st century but how governments manage and distribute access to e-governance service delivery models will determine whether e-governance can promote good governance or not.

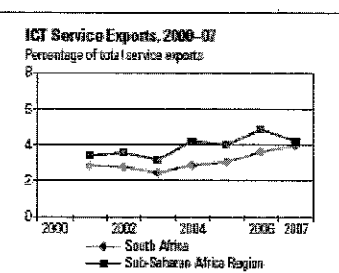
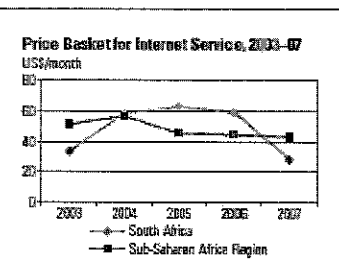
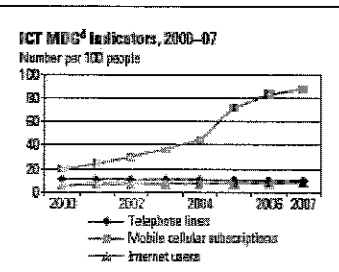
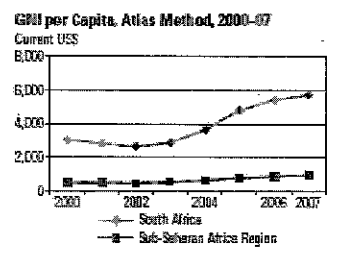
Annex 1: State of ICTs in South Africa

South Africa				
	South Africa 2000	South Africa 2007	Upper-middle- income group 2007	Sub-Saharan Africa Region 2007
Economic and social context				
Population (total, million)	44	48	824	800
Urban population (% of total)	57	60	75	36
GNI per capita, World Bank Atlas method (current US\$)	3,050	5,720	7,107	951
GDP growth, 1995–2000 and 2000–07 (avg. annual %)	2.5	4.3	4.3	5.1
Adult literacy rate (% of ages 15 and older)	—	88	94	62
Gross primary, secondary, tertiary school enrollment (%)	76	77	82	51
Sector structure				
Separate telecommunications regulator	Yes	Yes		
Status of main fixed-line telephone operator	Mixed	Mixed		
Level of competition ^a				
International long distance service	M	C		
Mobile telephone service	C	P		
Internet service	—	C		
Sector efficiency and capacity				
Telecommunications revenue (% of GDP)	5.1	7.5	3.3	4.7
Mobile and fixed-line subscribers per employee	264	1,145	588	499
Telecommunications investment (% of revenue)	25.5	9.8	—	—
Sector performance				
<i>Access</i>				
Telephone lines (per 100 people)	11.5	9.7	22.6	1.6
Mobile cellular subscriptions (per 100 people)	19.0	88.4	84.1	23.0
Internet subscribers (per 100 people)	1.5	9.1	9.4	1.2
Personal computers (per 100 people)	6.5	8.5	12.4	1.8
Households with a television set (%)	55	59	92	18
<i>Usage</i>				
International voice traffic (minutes/person/month) ^b	2.1	—	—	—
Mobile telephone usage (minutes/user/month)	—	106	137	—
Internet users (per 100 people)	5.5	8.3	26.6	4.4
<i>Quality</i>				
Population covered by mobile cellular network (%)	92	100	95	56
Fixed broadband subscribers (% of total Internet subscrib.)	0.3	3.9	47.8	3.1
International Internet bandwidth (bits/second/person)	8	71	1,185	36
<i>Affordability</i>				
Price basket for residential fixed line (US\$/month)	13.3	20.8	10.6	12.6
Price basket for mobile service (US\$/month)	—	13.9	10.9	11.6
Price basket for Internet service (US\$/month)	—	28.2	16.4	43.1
Price of call to United States (US\$ for 3 minutes)	1.98	0.79	1.55	2.43
<i>Trade</i>				
ICT goods exports (% of total goods exports)	2.0	1.8	13.5	1.1
ICT goods imports (% of total goods imports)	13.6	11.3	16.2	8.2
ICT service exports (% of total service exports)	2.9	3.9	4.6	4.2
<i>Applications</i>				
ICT expenditure (% of GDP)	—	9.7	5.2	—
E-government Web measure index ^c	—	0.55	0.37	0.16
Secure Internet servers (per 1 million people, Dec. 2006)	11.6	36.8	26.2	2.9

Sources: Economic and social context: UIS and World Bank; Sector structure: ITU; Sector efficiency and capacity: ITU and World Bank; Sector performance: Global Insight/WITSA, IME, ITU, Netcraft, UN Comtrade, UNDESA, UNPAN, Wireless Intelligence and World Bank. Produced by the Global Information and Communication Technologies Department and the Development Economics Data Group. For complete information, see Definitions and Data Sources.

Notes: Use of italics in the column entries indicates years other than those specified. — Not available. GDP = gross domestic product; GNI = gross national income; ICT = information and communication technology; and MDG = Millennium Development Goal.

a. C = competition; M = monopoly; and P = partial competition. b. Outgoing and incoming. c. Scale of 0–1, where 1 = highest presence. d. Millennium Development Goal indicators 8.14, 8.15, and 8.16.

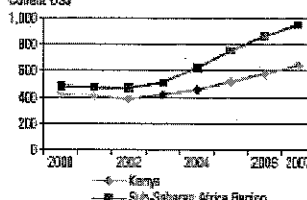


Annex 2: State of ICTs in Kenya

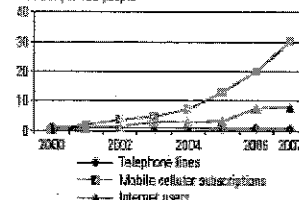
Kenya

	Kenya		Low-income group	Sub-Saharan Africa Region
	2000	2007	2007	2007
Economic and social context				
Population (total, million)	31	38	1,296	800
Urban population (% of total)	20	21	32	36
GNI per capita, World Bank Atlas method (current US\$)	420	640	574	951
GDP growth, 1995–2000 and 2000–07 (avg. annual %)	2.2	4.4	5.6	5.1
Adult literacy rate (% of ages 15 and older)	74	—	64	62
Gross primary, secondary, tertiary school enrollment (%)	53	67	57	57
Sector structure				
Separate telecommunications regulator	Yes	Yes		
Status of main fixed-line telephone operator	Public	Mixed		
Level of competition ^a				
International long distance service	M	C		
Mobile telephone service	P	P		
Internet service	C	C		
Sector efficiency and capacity				
Telecommunications revenue (% of GDP)	2.4	6.1	3.3	4.7
Mobile and fixed-line subscribers per employee	21	1,782	301	499
Telecommunications investment (% of revenue)	88.5	38.2	—	—
Sector performance				
Access				
Telephone lines (per 100 people)	0.9	0.7	4.0	1.6
Mobile cellular subscriptions (per 100 people)	0.4	30.2	21.5	23.0
Internet subscribers (per 100 people)	0.1	0.5	0.8	1.2
Personal computers (per 100 people)	0.5	1.4	1.5	1.8
Households with a television set (%)	15	39	16	18
Usage				
International voice traffic (minutes/person/month) ^b	0.2	0.3	—	—
Mobile telephone usage (minutes/user/month)	—	—	—	—
Internet users (per 100 people)	0.3	8.0	5.2	4.4
Quality				
Population covered by mobile cellular network (%)	—	77	54	56
Fixed broadband subscribers (% of total Internet subscri.)	0.0	0.5	3.4	3.1
International Internet bandwidth (bits/second/person)	0	9	26	36
Affordability				
Price basket for residential fixed line (US\$/month)	6.6	19.4	5.7	12.6
Price basket for mobile service (US\$/month)	—	17.8	11.2	11.6
Price basket for Internet service (US\$/month)	—	63.9	29.2	43.1
Price of call to United States (US\$ for 3 minutes)	7.35	3.00	2.00	2.43
Trade				
ICT goods exports (% of total goods exports)	0.1	1.0	1.4	1.1
ICT goods imports (% of total goods imports)	5.3	5.6	6.7	8.2
ICT service exports (% of total service exports)	2.2	4.1	—	4.2
Applications				
ICT expenditure (% of GDP)	—	8.2	—	—
E-government Web measure index ^c	—	0.30	0.11	0.16
Secure Internet servers (per 1 million people, Dec. 2006)	0.0	1.1	0.5	2.9

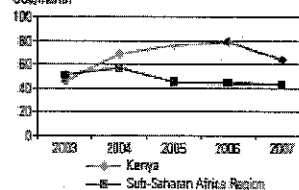
GNI per Capita, Atlas Method, 2000–07
Current US\$



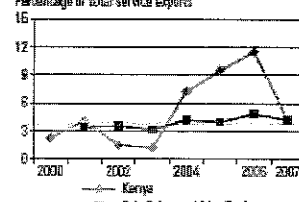
ICT MDG^d indicators, 2000–07
Number per 100 people



Price Basket for Internet Service, 2003–07
US\$/month



ICT Service Exports, 2000–07
Percentage of total service exports



Sources: Economic and social context: UIS and World Bank; Sector structure: ITU; Sector efficiency and capacity: ITU and World Bank; Sector performance: Global Insight/WITSA, IMF, ITU, Netcraft, UN Comtrade, UNDESA, UNPAN, Wireless Intelligence and World Bank. Produced by the Global Information and Communication Technologies Department and the Development Economics Data Group. For complete information, see Definitions and Data Sources.

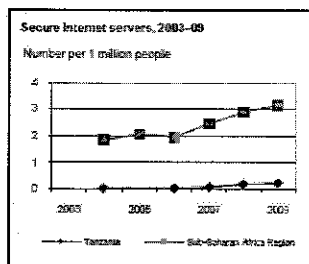
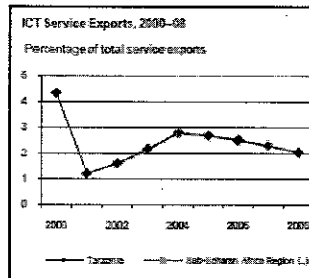
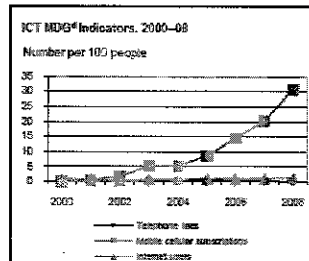
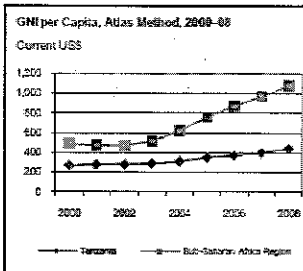
Notes: Use of italics in the column entries indicates years other than those specified. — Not available. GDP = gross domestic product; GNI = gross national income; ICT = information and communication technology; and MDG = Millennium Development Goal.

a, C = competition; M = monopoly; and P = partial competition. b. Outgoing and incoming. c. Scale of 0–1, where 1 = highest presence. d. Millennium Development Goal indicators 8.14, 8.15, and 8.16.

Annex 3: State of ICTs in Tanzania

Tanzania

	Tanzania		Low-income group	Sub-Saharan Africa Region
	2000	2008	2008	2008
Economic and social context				
Population (total, million)	34	42	976	819
Urban population (% of total)	22	26	29	36
GNI per capita, World Bank Atlas method (current US\$)	270	440	523	1,077
GDP growth, 1995–2000 and 2000–08 (avg. annual %)	3.9	6.8	5.8	5.2
Adult literacy rate (% ages 15 and older)	69	73	69	66
Gross primary, secondary, tertiary school enrollment (%)	33	54	53	52
Sector structure				
Separate telecommunications regulator	Yes	Yes		
Status of main fixed-line telephone operator	Mixed	Mixed		
Level of competition ^a				
International long distance service	P	M		
Mobile telephone service	C	C		
Internet service	C	C		
Sector efficiency and capacity				
Telecommunications revenue (% of GDP)	1.9	—	3.1	4.7
Mobile and fixed-line subscribers per employee	78	—	275	492
Telecommunications investment (% of revenue)	12.6	—	—	—
Sector performance				
Access				
Telephone lines (per 100 people)	0.5	0.3	4.6	1.5
Mobile cellular subscriptions (per 100 people)	0.3	30.6	28.5	33.3
Fixed Internet subscribers (per 100 people)	0.0	0.1	1.0	—
Personal computers (per 100 people)	0.3	0.9	1.7	2.0
Households with a television set (%)	3	6	—	—
Usage				
International voice traffic (minutes/person/month) ^b	0.1	0.0	—	—
Mobile telephone usage (minutes/user/month)	—	—	—	—
Internet users (per 100 people)	0.1	1.2	4.6	6.5
Quality				
Population covered by mobile cellular network (%)	25	65	56	56
Fixed broadband subscribers (% of total Internet subscribers)	0.0	0.0	7.2	—
International Internet bandwidth (bits/second/person)	0	2	24	34
Affordability				
Residential fixed line tariff (US\$/month)	—	10.9	9.0	11.6
Mobile cellular prepaid tariff (US\$/month)	—	11.1	10.0	11.8
Fixed broadband Internet access tariff (US\$/month)	—	58.0	102.4	100.1
Trade				
ICT goods exports (% of total goods exports)	0.4	0.4	2.5	0.9
ICT goods imports (% of total goods imports)	6.0	6.2	6.3	7.5
ICT service exports (% of total service exports)	4.3	2.0	—	—
Applications				
ICT expenditure (% of GDP)	—	—	—	—
E-government Web measure index ^c	—	0.23	0.11	0.16
Secure Internet servers (per 1 million people, December 2009)	—	0.2	0.5	3.1

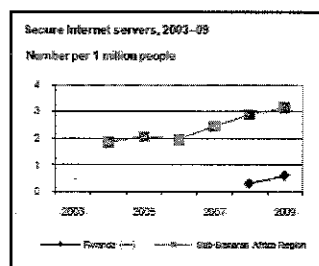
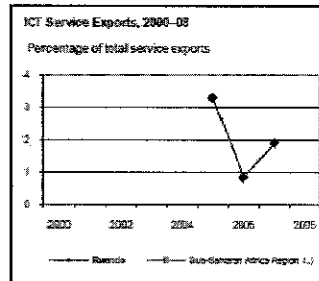
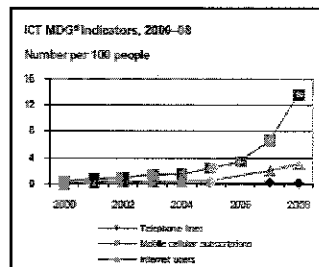
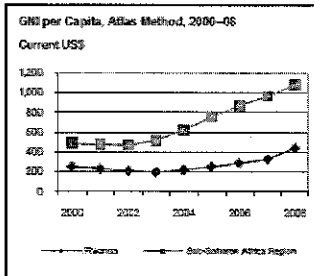


Sources: Economic and social context: UIS and World Bank; Sector structure: ITU; Sector efficiency and capacity: ITU and World Bank; Sector performance: Global Insight/WITSA, IMF, ITU, Netcraft, UN Comtrade, UNDESA, UNPAN, Wireless Intelligence and World Bank. Produced by the Global Information and Communication Technologies Department and the Development Economics Data Group. For complete information, see Definitions and Data Sources.

Notes: Use of italics in the column entries indicates years other than those specified. — Not available. GDP = gross domestic product; GNI = gross national income; ICT = information and communication technology; and MDG = Millennium Development Goal. GDP and GNI data cover mainland Tanzania only. a. C = competition; M = monopoly; and P = partial competition. b. Outgoing and incoming. c. Scale of 0–1, where 1 = highest presence. d. Millennium Development Goal indicators 8.14, 8.15, and 8.16.

Annex 4: State of ICTs in Rwanda

Rwanda	Rwanda		Low-income group	Sub-Saharan Africa Region
	2000 ^a	2008	2008	2008
Economic and social context				
Population (total, million)	8	10	976	819
Urban population (% of total)	14	18	29	36
GNI per capita, World Bank Atlas method (current US\$)	250	440	523	1,077
GDP growth, 1995–2000 and 2000–08 (avg. annual %)	10.1	6.7	5.8	5.2
Adult literacy rate (% ages 15 and older)	65	70	69	68
Gross primary, secondary, tertiary school enrolment (%)	46	65	53	52
Sector structure				
Separate telecommunications regulator	No	Yes		
Status of main fixed-line telephone operator	Mixed	Mixed		
Level of competition ^b				
International long distance service	M	P		
Mobile telephone service	M	P		
Internet service	—	C		
Sector efficiency and capacity				
Telecommunications revenue (% of GDP)	1.0	3.1	3.1	4.7
Mobile and fixed-line subscribers per employee	189	1,952	275	492
Telecommunications investment (% of revenue)	93.1	15.8	—	—
Sector performance				
Access				
Telephone lines (per 100 people)	0.2	0.2	4.6	1.5
Mobile cellular subscriptions (per 100 people)	0.5	13.6	26.5	33.3
Fixed internet subscribers (per 100 people)	0.0	0.1	1.0	—
Personal computers (per 100 people)	0.1	0.3	1.7	2.0
Households with a television set (%)	2	12	—	—
Usage				
International voice traffic (minutes/person/month) ^c	—	0.9	—	—
Mobile telephone usage (minutes/user/month)	—	—	—	—
Internet users (per 100 people)	0.1	3.1	4.6	6.5
Quality				
Population covered by mobile cellular network (%)	50	92	56	56
Fixed broadband subscribers (% of total internet subscribers)	0.0	50.1	7.2	—
International internet bandwidth (bits/second/person)	0	27	24	34
Affordability				
Residential fixed line tariff (US\$/month)	—	7.3	9.0	11.6
Mobile cellular prepaid tariff (US\$/month)	—	10.0	10.0	11.8
Fixed broadband internet access tariff (US\$/month)	—	91.8	102.4	100.1
Trade				
ICT goods exports (% of total goods exports)	0.0	0.5	2.5	0.9
ICT goods imports (% of total goods imports)	9.3	12.5	6.3	7.5
ICT service exports (% of total service exports)	—	1.9	—	—
Applications				
ICT expenditure (% of GDP)	—	—	—	—
E-government Web measure index ^d	—	0.27	0.11	0.16
Secure internet servers (per 1 million people, December 2009)	0.5	0.6	0.5	3.1



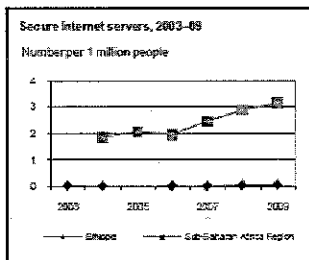
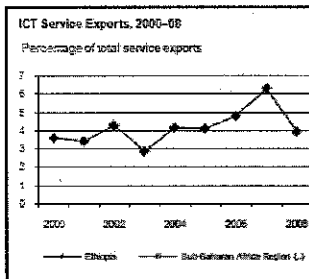
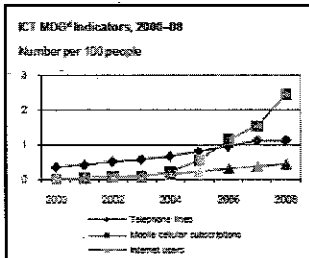
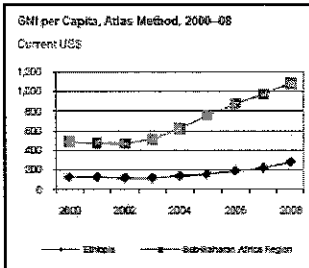
Sources: Economic and social context: UIS and World Bank; Sector structure: ITU and World Bank; Sector efficiency and capacity: ITU and World Bank; Sector performance: Global Insight/WITS, IMF, ITU, Netcraft, UN Comtrade, UNDESA, UNPAN, Wireless Intelligence and World Bank. Produced by the Global Information and Communication Technologies Department and the Development Economics Data Group. For complete information, see Definitions and Data Sources.

Notes: Use of italics in the column entries indicates years other than those specified. — Not available. GDP = gross domestic product; GNI = gross national income; ICT = information and communication technology; and MDG = Millennium Development Goal. a. C = competition; M = monopoly; and P = partial competition. b. Outgoing and incoming. c. Scale of 0–1, where 1 = highest presence. d. Millennium Development Goal indicators 8.14, 8.15, and 8.18.

Annex 5: State of ICTs in Ethiopia

Ethiopia

	Ethiopia		Low-income group	Sub-Saharan Africa Region
	2000 ^a	2008	2008	2008
Economic and social context				
Population (total, million)	66	81	976	819
Urban population (% of total)	15	17	29	36
GNI per capita, World Bank Atlas method (current US\$)	130	280	523	1,077
GDP growth, 1995–2000 and 2000–08 (avg. annual %)	3.5	6.2	5.8	5.2
Adult literacy rate (% ages 15 and older)	—	36	68	66
Gross primary, secondary, tertiary school enrolment (%)	29	53	53	52
Sector structure				
Separate telecommunications regulator	Yes	Yes		
Status of main fixed-line telephone operator	Public	Public		
Level of competition ^b				
International long distance service	M	M		
Mobile telephone service	M	M		
Internet service	M	M		
Sector efficiency and capacity				
Telecommunications revenue (% of GDP)	1.1	1.3	3.1	4.7
Mobile and fixed-line subscribers per employee	35	233	275	492
Telecommunications investment (% of revenue)	42.6	21.4	—	—
Sector performance				
Access				
Telephone lines (per 100 people)	0.4	1.1	4.6	1.5
Mobile cellular subscriptions (per 100 people)	0.0	2.4	28.5	33.3
Fixed Internet subscribers (per 100 people)	0.0	0.0	1.0	—
Personal computers (per 100 people)	0.0	0.7	1.7	2.0
Households with a television set (%)	—	5	—	—
Usage				
International voice traffic (minutes/person/month) ^c	0.1	0.2	—	—
Mobile telephone usage (minutes/user/month)	—	—	—	—
Internet users (per 100 people)	0.0	0.4	4.6	6.5
Quality				
Population covered by mobile cellular network (%)	—	10	56	56
Fixed broadband subscribers (% of total Internet subscribers)	0.0	1.2	7.2	—
International Internet bandwidth (bits/second/person)	0	3	24	34
Affordability				
Residential fixed line tariff (US\$/month)	—	4.5	9.0	11.6
Mobile cellular prepaid tariff (US\$/month)	—	3.1	10.0	11.8
Fixed broadband Internet access tariff (US\$/month)	—	644.0	102.4	100.1
Trade				
ICT goods exports (% of total goods exports)	0.0	0.5	2.5	0.9
ICT goods imports (% of total goods imports)	5.0	7.9	6.3	7.5
ICT service exports (% of total service exports)	3.6	3.9	—	—
Applications				
ICT expenditure (% of GDP)	—	—	—	—
E-government Web measure index ^d	—	0.17	0.11	0.16
Secure Internet servers (per 1 million people, December 2009)	0.0	0.1	0.5	3.1



Sources: Economic and social context: UIS and World Bank; Sector structure: ITU; Sector efficiency and capacity: ITU and World Bank; Sector performance: Global Insight/WITSA, IMF, ITU, Netcraft, UN Comtrade, UNDESA, UNPAN, Wireless Intelligence and World Bank. Produced by the Global Information and Communication Technologies Department and the Development Economics Data Group. For complete information, see Definitions and Data Sources.

Notes: Use of italics in the column entries indicates years other than those specified. — Not available. GDP = gross domestic product; GNI = gross national income; ICT = information and communication technology; and MDG = Millennium Development Goal. a. C = competition; M = monopoly; and P = partial competition. b. Outgoing and incoming. c. Scale of 0–1, where 1 = highest presence. d. Millennium Development Goal indicators 8.14, 8.15, and 8.16.

Annex 6: E-government Readiness Indices

	Country	Index	Rank in:		Change
			2004	2005	
1	Mauritius	0.5317	52	51	-1
2	South Africa	0.5075	58	55	-3
3	Seychelles	0.4884	63	70	7
4	Botswana	0.3978	90	91	1
5	Egypt	0.3793	99	136	37
6	Swaziland	0.3593	108	101	-7
7	Namibia	0.3411	111	116	5
8	Lesotho	0.3373	114	117	3
9	Zimbabwe	0.3316	120	130	10
10	Kenya	0.3298	122	126	4
11	Algeria	0.3242	123	118	-5
12	Uganda	0.3081	125	114	-11
13	United Republic of Tanzania	0.302	127	131	4
14	Gabon	0.2928	131	124	-7
15	Ghana	0.2868	133	143	10
16	Congo	0.2855	134	125	-9
17	Morocco	0.2774	138	138	0
18	Nigeria	0.2758	139	141	2
19	Madagascar	0.2641	141	148	7
20	Rwanda	0.253	143	140	-3
21	Cameroon	0.25	145	139	-6
22	Mozambique	0.2448	146	150	4
23	Djibouti	0.2381	149	153	4
24	Sudan	0.237	150	147	-3
25	Senegal	0.2238	153	145	-8
26	Comoros	0.1974	155	157	2
27	Eritrea	0.1849	157	--	--
28	Angola	0.184	158	151	-7
29	Mauritania	0.1723	164	163	-1
30	Burundi	0.1643	166	166	0
31	Sierra Leon	0.1639	167	161	-6
32	Chad	0.1433	169	169	0
33	Guinea	0.1396	170	168	-2
34	Ethiopia	0.136	171	170	-1
35	Niger	0.0661	174	173	-1
	Average	0.264			

Source: Global E-government Readiness Report 2005

[illegible]

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Annex 8: Kenya Anti-Corruption Commission Webpage

KACC - KENYA ANTI-CORRUPTION COMMISSION
On Job Frontline Against Corruption

Home / Corruption / Ethics / Integrity / EACB

REPORT CORRUPTION NOW: Report Corruption Now [Print Version](#)

Reporting corruption

Kenya Anti-Corruption Commission gathers information on corruption occurring in Government and the public Sector from a variety of sources. These sources include members of the public, heads of government departments and agencies, officials working in both the public and private sectors and the media.

Information can be provided to KACC in writing, by telephone or by presenting it personally to the Commission's Report Centre at Integrity Centre in Nairobi and Mombasa office at Apollo Court - Moi Avenue. The Commission's contact details are listed below.

One can also pass on information anonymously to the Commission through the Anonymous Whistleblower's System on this Website.

Members of the public are assured that all the information provided to the Commission is treated with the utmost confidentiality to ensure protection to those who provide information to KACC.

Annual Report 2007/2008

ABOUT KACC
WHAT'S NEW
PRESS RELEASES/SPEECHES
REPORT CORRUPTION NOW
PUBLICATIONS
MULTIMEDIA
COURT CASES
ADVERTS
LEGISLATION

Source: <http://www.kacc.go.ke/default.asp?pageid=16>

Annex 9: National Bureau of Statistics Tanzania's webpage

NATIONAL BUREAU OF STATISTICS TANZANIA

Welcome to the NBS website

>> STATISTICAL ACTIVITIES

The following activities are undertaken by the NBS:

- Agriculture Survey
- Business Census
- Central Register of Establishments (CRE)
- Construction, Mining and Quarrying Survey on Quarterly Basis
- Consumer Price Index Compilation on Monthly and Annual Basis
- Demographic and Health Survey
- Economic Survey Tables Preparation
- Employment and Earnings Survey on Annual Basis
- Integrated Labour Force Survey (ILFS)
- Geographical Information System Development
- Industrial Production Survey on Quarterly and Annual Basis
- National Accounts Compilation
- National Master Sample Frame Revision
- Population and Housing Census Results Dissemination
- Producer Price Index Compilation
- Statistical Data Processing
- Tanzania Integrated Statistical Database Development
- Tax Statistics Indicator Preparation
- Tourism Sector Survey

NAVIGATION

- STATISTICAL ACTIVITIES
- PRODUCTS & SERVICES
- PUBLICATIONS
- STATISTICAL LIBRARY
- STATISTICAL METHODS
- REGIONAL OFFICES
- STATISTICS ACT
- TSED (INDICATORS)
- INTEGRATED STATISTICAL DATABASE
- RELATED LINKS

CONTACT US

December 4, 2008

NBS Annual Performance Report 2003/04 (PDF)

MAP OF TANZANIA

HOME

ABOUT US

CONTACT US

INTERNET

Source: <http://www.nbs.go.tz/activities.htm>

Directorate of Immigration and Emigration - Windows Internet Explorer
 Http://www.migration.gov.rw/singleform.php
 Directorate of Immigration and Emigration

Compliments-Complaints | Contact Us | Check Mail

Rwanda Directorate General of Immigration and Emigration

COMING TO RWANDA | ABOUT US | SERVICES | PUBLIC FORMS | TRACKING TOOLS | MEDIA CENTRE | LAWS AND ACTS | OTHER INFO

ENTRY VISA

PERSONAL IDENTIFICATION

Firstname:

Middlename:

Surname / Lastname:

Profession:

Current Occupation:

Gender: ☒ Male ☐ Female

Father's names:

Mother's names:

Spouse's names:

Passport no:

Nationality: 2. None


Nationality if others:


Date of birth: 01 January 1990

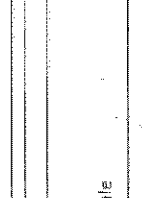
Place of birth:

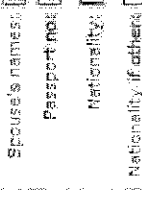
Country of Birth:

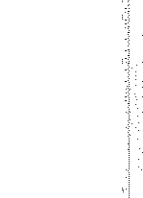
Preferred language: English











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