

E-GOVERNMENT IN ZIMBABWE: AN OVERVIEW OF PROGRESS MADE AND CHALLENGES AHEAD

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Abstract: This paper surveyed the level of preparedness by the Zimbabwe government in using information and communication technologies to enhance the range and quality of services provided to the citizen; and determined the extent of, and continuous improvement efforts of Zimbabwe leaders towards the attainment of connected government. Data for the study was a secondary data adapted from the Internet. The UN global e-government readiness ranking and the models of e-government were downloaded, adapted and used as a benchmark for measuring the web readiness of the Zimbabwe governments in 2005, 2008, 2010 and 2012. It was discovered that the Zimbabwean government has demonstrated its willingness to apply information and communication technologies (ICTs) in their public administration, but is at the emerging stages. A serious impediment which characterized e-government readiness in Zimbabwe is low level of human capital and knowledge economy. The implications include poor provision of government services and underutilization of ICTs facilities in Zimbabwe which might result in the widening of 'access divide' between the rich and the poor.

Keywords- Zimbabwe, e-government, Information and communication technologies (ICTs), Public services, Global ranking, E-government models

INTRODUCTION

Zimbabwe is one of the rare countries in Africa with a history of commitment to good governance and ICT- related initiatives. In recent years, Zimbabwe's efforts to provide e-government services to the public have been recognised. Although an e-government program in Zimbabwe is still at the initial stages, Zimbabwe has developed relatively advanced ICT-government service delivery capabilities. In addition, the United Nations' e-government readiness reports ranked Zimbabwe at position 123 out of 193 member states. However, it seems that the level of e-government development in Zimbabwe is still low.

DEFINITIONS OF E-GOVERNMENT

E-government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet and mobile computing) that have the ability to transform relations with citizens, businesses and other arms of government [1]. These information technologies could contribute to: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information [2], or more efficient government management. According to Willoughby the resulting benefit of e-Government scan will be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions. Traditionally, the interaction between a citizen or business and a government agency took place in a government office meaning that the client had to avail themselves to government offices in order to conduct business. With emerging information [3] and communication technologies, it is possible to locate service centres closer to the clients.

The preceding discussion helps to deduce a working definition for e-Government. E-Government may simply be defined as the utilization of ICTs to transform and enhance the relationship

of the public sector and its clients through an improved range and quality of service [4]. That is, e-Government harnesses the potentials of all ranges of ICTs to ensure that the public sector, governments in particular, are transformed to serve their stakeholders and exceed their expectations. Stakeholders may include citizens, business, employees, and other entities and other government bodies. The paper will adopt this viewpoint.

E-Government is described as an important move to introduce changes that are needed to leverage the efficiency, effectiveness and accountability of the public sector. Yang summarizes that e-Government is intended for improving (a) the management of public finances, human resources, and service delivery, (b) access to and the quality of public services, particularly the poor people, (c) investment climate, e.g. lowering regulatory burdens and transaction costs, and (d) the transparency and accountability of governments.

According to Yang e-Government is not a panacea for all the problems of the public sector. Several issues have been considered as the key limitations of e-Government. For example, e-Government may result into loss of person to person interaction. This may cause problems in culture where human interaction is important add that e-Government may disrupt the organisational structures, works and control powers of the public organisations. This is because e-Government does not work well with traditional top down government bureaucracies. Lam asserts that it is a cross-cutting phenomenon that requires an integrated vertical as well as horizontal information flow. Consequently, structural changes, legal, and process reforms need to be undertaken.

E-Government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can contribute to better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment

through access to information, or more efficient government management. According to Sharma the resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions". Analogous to e-commerce, which allows businesses to transact with each other more efficiently (B2B) and brings customers closer to businesses (B2C), e-Government aims to make the interaction between government and citizens (G2C), government and business enterprises (G2B), inter-agency relationships (G2G) and Internal Efficiency and Effectiveness (IEE) more friendly, convenient, transparent, and inexpensive (United States 'e-Government Strategy).

"E-Government is ---simply using information technology to deliver government services directly to the customer." The customer can be a citizen, a business, or even another government entity. Brown and Brudney, defined e-Government as the use of technology, especially Web based applications to enhance access to and efficiently deliver government information and services. These two categorize e-government efforts into three broad categories of Government to Government (G2G), Government to Citizen (G2C), Government to Business (G2B). Brown and Brudney further assets that one way also include two additional categories in this list: Government to Civil Society Organisations (G2CS) and Citizen to Citizen (C2C).

What does it take to become an 'e-government'? Haiyan assets that the answer is not simple. The quest is multi-dimensional across leadership, policy, economic competitiveness, education, digital citizen services, internal government operations and enabling technologies for each dimension. The multidimensional factor needs to be implemented through the seven e-government milestones: integration, economic development, e-democracy, e-communities, intergovernmental, policy environment and next generation internet.

E-GOVERNANCE IS THE RESULT OF E-GOVERNMENT

E-Governance goes beyond E-Government. It calls upon ways and means of employing modern ICTs to address the issues of governance i.e the participation in the decision processes of citizens and other actors. This implies deploying efforts in the participation of all citizens, the access divide and promoting opportunities for social empowerment [5].

Emphasis on the transformative possibilities of e-Government make it clear that e-governance is the successful outcome of e-Government [6]. The use of ICTs, especially the Internet, to adopt a new conception and attitude of governing [7] and managing where participation and efficiency are required of all the partners linked in a network. Governments can utilise e-governance to re-invent themselves, get closer to the citizenry and forge closer alliances and partnerships with diverse communities, within the context of development. E-government without e-governance is business as usual. As Kitaw observes "Fundamental to seize the opportunities of e-Government in Africa is the genuine commitment and willingness of governments to induce transformational patterns towards being more citizen-centred."

E-Governance involves new styles of leadership, new ways of debating and deciding policy and investments, new ways of

accessing education, new ways of listening to citizens and new ways of organizing and delivering information and services. E-Governance may be understood as the performance of this governance via the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public, and other agencies, and for performing government administration activities [8].

E-Governance is generally considered as a wider concept than e-Government, since it can bring about a change in the way how citizens relate to the government and to each other. E-Governance can bring forth new concepts of citizenship, both in terms of citizen needs and responsibilities. Its objective is to engage, enable and empower the citizen.

METHODOLOGY APPROACHES

Data for this study was secondary data collected from the Internet. The UN Global E-Government Reports of 2005, the Survey of 2008, 2010 and 2012 were retrieved from the internet. The ICT programmes and other related programmes for Zimbabwe were also adapted from documented sources.

E-GOVERNMENT DELIVERY MODELS

In order to explore issues that are central to this study, E-government will be discussed in line with the following models.

Government-to-citizen links (G2C)

G2C initiatives are designed to facilitate citizen interaction with government, which is what some observers perceive to be the primary goal of e-government. Service delivery systems may be linked with life events and citizen needs. For example, many of the compliance tasks involved in foreign travel can be linked with each other on the same website. Passports, visas, health warnings and vaccinations may be accessed together when someone, or their agent, books travel. It is much easier to renew vehicle or drivers' licenses or pay fines through links of this kind. E-Government allows public agencies to provide many services whenever its clients require them and without having to attend an office in person. Renewing of licenses, changes of address or even completing forms for provision of welfare can be done on-line. It is also cheaper.

Government to Citizen (G2C) deals with the relationship between government and citizens. E-Government allows government agencies to talk, listen, relate and continuously communicate with its citizens, supporting, in this way, accountability, democracy and improvements to public services G2C allows customers to access government information and services instantly, conveniently, from everywhere, by use of multiple channels (PC, Web TV, mobile phone, or wireless device).

Government –to-business links (G2B)

Government to Business (G2B) focuses on the electronic interactions between government agencies and private business [9]. This allows e-transaction initiatives such as e-procurement and the development of an electronic market place for government. The opportunity to conduct online transactions with government reduces red tape and simplifies

regulatory processes, therefore helping business to become more competitive. Rashid, further asserts that the delivery of integrated, single-source public services creates opportunities for business and government to partner together for establishing a web presence faster and cheaper.

Government-to-Business initiatives receive a significant amount of attention, in part, because of the high enthusiasm of the business sector and the potential for reducing costs through improved procurement practices and increased competition [10]. Large companies such as Ford and General Motors use the internet to source parts. Public organisations, too, are placing significant resources into delivery and procurement systems for their interactions with business. These are cost savings to be made by government in the area of procurement. The higher costs being charged to the government by tenderers can be reduced by e-Government. Procurement of standard items such as stationary is much easier and cheaper through placing orders to contractors on their website [11].

The government encourages participatory deliberative decision-making and is willing and able to involve the society in a two way open dialogue. Through interactive features such as the web comment form, and innovative online consultation mechanisms, the government actively solicits citizens' views on public policy, law making, and democratic participatory decision making. Implicit in this stage of the model is the integration of the public sector agencies with full cooperation and understanding of the concept of collective decision-making, participatory democracy and citizen empowerment as a democratic right [12].

Government to employee (G2E)

Government to Employee (G2E) refers to the relationship between government and its employees. G2E is an effective way to provide e-learning, bring employees together and to provide knowledge sharing among them. It gives employees the possibility of accessing relevant information regarding compensation and benefit policies, training and learning opportunities.

Government –to-government links (G2G)

Government to Government (G2G) refers to the relationship between governmental organisations, for example national, regional and local governmental organisations, or with foreign governmental organisations [13]. Government depends on other levels of government within the state to effectively deliver services and allocate responsibilities. Online communication and cooperation allows government agencies and departments to share databases, resources, pool skills and capabilities, enhancing the efficiency and affectivity of processes.

Government agencies increasingly use electronic links between each other in order to improve service delivery. The exchange of information can be within the government, other levels of government, even governments of other nations may benefit by electronic exchange of information. In the case of foreign travel, it would also be possible for the booking or requesting a passport or visa to trigger a set of other government –to-government information flows, ranging from immigration or customs checks to dealing with security concerns.

The Survey shows that there is a gap across each level of

e-Government functionality between developed and developing countries. Most governments worldwide have websites that meet functions at the Emerging level and the most prevalent level are websites with functions at the connected level. 94% of developed countries websites are at the Emerging level compared to 72% for developing countries. 11% of websites in developing countries have transactional e-Government features and 14% with connected e-Government features. Developed countries have more than 36% of the same website features.

EVALUATING PROGRESS IN E-GOVERNMENT IN ZIMBABWE

Zimbabwe has been beleaguered by economic, social, and political turmoil in recent years which has had a debilitating effect on its already-declining economy [14]. The country has a dedicated national ICT policy that was adopted in 2005 and that makes significant references to the promotion of ICTs. The country also has a vibrant civil society sector that promotes ICT for development and education, of which organisations such as World Links Zimbabwe has played a pioneering role since the late 1990s.

Over the past few years, the Zimbabwean economy has been beset with crises characterised by an unsustainable fiscal deficit, an overvalued exchange rate, and rampant inflation (which stood at 1,000% in 2006). Zimbabwe ranks higher on the UNDP Human Development Index than Angola, Eritrea, Nigeria, Rwanda, and Zambia which are all, along with Zimbabwe, classified as low income countries.

ICT INITIATIVES

The historical development of e-Government in Zimbabwe can be traced back to 1999 (Table 1). The Government of Zimbabwe (GoZ) through its partnerships with the National Economic Consultative Forum (NECF) and support from the United Nations Development Programme (UNDP), commissioned an e-Readiness Survey whose purpose was to assess the country's readiness to become a knowledge society.

Findings on e-Government development showed that (i) the GoZ possessed an immense potential for e-Government through its Wide Area Networks (WANs) and application systems such as SAP software, civil service payroll, national registration system and pensions processing; (ii) online communication which supported e-Business [15] models such as G2B and G2C (iii) many rural areas in Zimbabwe did not have electricity making it impossible to introduce ICT-based services. Ruhonde et al. report that the GoZ has established WANs that are accessible to all government departments and ministries. The reasons for the establishment of the WANs are twofold; (i) to use Internet and Intranet access to enhance public sector [13] wide information access and exchange and (ii) to maximise the benefits of government-wide acquisition of telecommunications services (Table 1).

Table 1 indicates that there have been significant developments of ICT initiatives since 1999. The first initiative was through the Nziramasanga Education Commission Report which aimed at providing recommendations for the introduction of ICT teaching and learning in schools as an early foundation in the

development of ICT literacy. This was followed by the Science and Technology Policy of 2002 which aimed to promote and harness science and technology [16] for national development. The National Economic Recovery Programme was launched in 2003. NERP emphasis the need for Zimbabwe to exploit the potential of science and technology and increase export market [17].

Table 1: Summary of ICT initiatives 1999-2006.

ICT Initiative	Brief Description	Year Implemented
National ICT Policy Framework	To provide guidelines for National ICT implementations	2006
Single Government-Wide Web Portal	To pull Government information and services to one access point	2005
National e-Readiness survey	To assess the degree of the country's e-Readiness towards becoming an information society	2005
Zimbabwe Millennium Developed Goals (MDGs)	A report recognizing ICT as a player in meeting UN's MDGs	2005
National Economic Recovery Programme (NERP)	Economic Turnaround Strategy using Science and Technology	2004-2006
Industrialisation Policy	To embrace ICTs in the manufacturing sector to boost export	2004
Science and Technology Policy	To promote and harness Science and technology for National development	2002
Nziramasanga education Commission Report	Recommended the introduction of ICT teaching and learning in schools	1999

Source: Ruhonde et al. 2008

The Government of Zimbabwe in conjunction with the National Economic Consultative Forum (NECF) and with support from the United Nations Development Programme (UNDP) [18] commissioned an e-Readiness Survey in 2005. The purpose was to assess the country's readiness to become a knowledge society [19]. The survey indicated that there was a lot of work to be done in terms of preparing Zimbabwe for e-business. Out of a score of 4, Zimbabwe scored 1.4 (National e-Readiness Survey). With respect to e-Government, the survey findings indicated that the Zimbabwe Government possesses an immense potential through its wide area network and application systems such as SAP software, civil service payroll, national registration system and pensions processing. Most of the online communication is G2B and G2C, but there is no citizen- to -government (C2G) online communication. The institutional mechanisms for ICT are not well- defined and coordinated and there is no integrated government policy framework for the development of e-Government [20]. The findings indicate some progress on ICT based efforts by the Zimbabwe government. The low score is a result of a backward ICT infrastructure especially in telecommunications. It is difficult to introduce ICT based services in rural areas because many do not have electricity. There is need for a well defined e-government strategy which should be able to articulate such shortcomings. This can prompt the central government to commit financial and other resources towards infrastructure (UNDP).

A National ICT Policy Framework was developed in Zimbabwe in 2006. The purpose was to come up with the requisite guidance and direction to the formulation and implementation of ICT strategies and programmes in and across all sectors of

the economy. The policy framework was crafted under the vision: "to transform Zimbabwe into knowledge- based society by the year 2020." The mission of which is, "to accelerate the development and application of ICTs in support of sustainable socio-economic growth and development in Zimbabwe." (Zimbabwe: National Information and communication Technology Project). A well defined National Strategy would enable Zimbabwe to effectively participate in the global market. The policy would also enable Zimbabwe to coordinate various initiatives in the public and private sectors and other stakeholders within and outside Zimbabwe.

Key to the historical development of e-Government was the Single Government Wide Web portal which aimed at pulling government information and services to a single access point. Whilst there were significant pointers to the development of ICTs in Zimbabwe and specifically initiatives in e-Government development, there is a vast absence of the current status quo of e-Government development in the country. There is also very little literature which identifies the pace, prospects, challenges and problems of ICT development in government ministries.

Other Ict Initiatives

AVU teacher education project

The African Virtual University (AVU) established an ambitious teacher education project involving 10 African countries, in partnership with African Development Bank (AfDB) and the NEPAD in 2006. Zimbabwe is one of the 10 countries involved. The programme focuses on mathematics and science education and the integration of ICTs in and across the teaching of the curricula in these two subject areas. The intention is to contribute to the growth of more and better quality teachers through the use of flexible, open, distance, and e-learning (ODEL) methodologies at an affordable cost for diploma, undergraduate, and graduate levels.

The specific objectives of the project are to enhance the capacity of teachers in the use of ICTs in teaching and learning of mathematics and science, to develop the capacity of teachers to deliver ICTs as a subject in secondary education, and to increase the number of mathematics and science teachers by expanding access to training through ODeL methods. The project has set targets of developing six ODeL modules by early 2007, the content of which will be available in Portuguese, French, and English. The authors are drawn from 12 institutions in the 10 countries that the funding covers. The University of Zimbabwe is one of these 12 institutions.

College IT Enhancement Programme (CITEP)

CITEP is a local capacity-building project supported by the Flemish Office for Development Co-operation and Technical Assistance (VVOB) in 10 Zimbabwean colleges. The focus is on developing capacity to maintain and manage ICT equipment and strategies for effective use of ICTs in the colleges. The project focused on the following outcomes:

- Clear ICT policies in place in participating colleges and being effectively applied
- Technical and professional skills of college ICT unit staff upgraded

- Present ICT infrastructure in participating colleges fully utilised (including the development of staff development strategies for the promotion of ICT-supported teaching and learning).

Kubatana trust of zimbabwe

The Kubatana Trust of Zimbabwe, which includes an NGO network organisation called the NGO Network Alliance Project (NNAP), has been established to strengthen the use of e-mail and Internet among Zimbabwean NGOs and civil society organisations and to provide human rights and civic education information and materials. Kubatana has a network of 240 NGOs and community service organisations which are involved in its lobbying and advocacy campaigns. Kubatana also provides Internet space to these organisations via an online directory.

World links Zimbabwe

World Links Zimbabwe is part of the international network of World Links organisations and has historically been a pioneer in the promotion of education through ICTs. The organisation has been active in Zimbabwe since mid-1999 when 12 ICT centres were established with the support of the World Bank and in partnership with the Ministry of Education Sport and Culture. Each of these pilot World Links centres were established near schools so that they could service both the schools and the community. In this sense World Links Zimbabwe pioneered the concept of school-based tele centres. World Links Zimbabwe was also known for its introduction of a bus, known as the Big Blue, installed with computers supplied by groups such as Computers for African Schools based in the UK. The bus moves to remote rural areas to encourage access to ICTs by these communities.

World Links Zimbabwe is now an independent registered trust and has established partnerships with a host of organisations and institutions including Computers for African Schools and School Net Africa, the latter for whose Campaign for 1 Million PCs it now leads and with whom, in partnership with the Open Society Initiative for Southern Africa, promoted access to open source software in schools as well as support for a local PC refurbishment centre. It now has 43 tele centres throughout the country of which 35 have dial-up connectivity to the Internet.

A number of challenges to e-Government adoption in Zimbabwe have been reported through various literature. Literature shows that some of the major challenges that inhibit e-Government initiatives are lack of funding, rigid organization structures, poor ICT infrastructure, low ICT literacy rate, high human resource turnover, limited Public-Private Partnerships.

INFRASTRUCTURE

According to the World Economic Forum's Global Information Technology Report, Zimbabwe ranks 105th out of 115 economies in 2005-2006, based on a networked readiness index, which measures the degree of preparation of a nation to participate in and benefit from ICT developments. This ranking is slightly higher than Benin, Chad, and Ethiopia.

According to the World Economic Forum's Global report, a major boost to Zimbabwe's ICT infrastructure is the impending establishment of the East African Submarine Cable System (EASSy), which is a submarine optical fibre system running

along the east coast of Africa and which includes Zimbabwe. This project is facilitated by the New Partnership for Africa's Development (NEPAD) e-Africa Commission in partnership with a host of telecom companies in Africa.

The Zimbabwe Agenda for Sustainable Socio- Economic Transformation (Zim ASSET)

The Zim ASSET focuses towards an empowered society and a growing economy. It covers the period October 2013 to December 2018. The Zim ASSET section on Information Communication Technology focuses on the four Key Result Areas:-addressing ICT Governance, ICT Backbone and Infrastructure, E-Government and ICT Research and Development. The strategies to address these include engaging friendly countries and developing partners to invest in ICTs. The importance of this document lies in its contribution towards better policy and strategy formulation for the adoption of e-government in Zimbabwe.

CHALLENGES, STRATEGIES AND WAY FORWARD

The literature presented above highlight the importance of government preparedness on the development of e-Government initiatives. However, most of the authors emphasize on the importance of discrete elements regarding government preparedness. Various reasons have been suggested to explain the slow progress of e-Government in the developing countries. The reasons include the lack of adequate data analysis and technological infrastructure. Other reasons are inadequate human capital and skills and the lack of strategic leadership. Nevertheless, developing countries have resorted to invest in e-Government. Through, creativity and careful planning these developing countries, Zimbabwe included can still successfully implement e-Government.

Many developing countries worldwide, have implemented ICT applications to deliver information and services to the public through the internet. There is also a growing interest to determine how to assist developing countries implement e-Government services. The particular challenge for governments in developing countries is to build organizational capabilities to customize e-Government applications to local conditions. In order to address the disparities, several writers made the following recommendations to assist government leaders:

- Develop a strategic plan to guide e-Government services;
- Understand the needs of all segments of public to make sure the e-Government system genuinely assists each citizen to fulfill his or her own development needs; and, enable citizens to participate in the design of e-Government services.
- Use well established system development practices to carry out the day to day activities of developing, implementing and maintaining government services.
- Create a learning organisation where employees are encouraged to participate in developing and managing e-Government services.
- Develop effective ICT governance mechanisms to assign roles and responsibilities for managing and making decisions about e-Government services.

- Develop ICT capabilities focusing on building a suitable ICT infrastructure to sustain long term investment in e-Government, nurturing the development of human capital within the government to use ICTs for e-Government, and facilitating the skills of employees to develop and manage partnerships with private sector firms and other possible partners;
- Provide a secure experience for web visitors by developing an e-Government security and disaster recovery plan.

For developing countries to move forward there is need to come up or choose the most appropriate approach to manage the process of assimilating the e-Government service to best meet the needs of its citizenry.

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