

Challenges of E-Government in African Countries: Creating an Enabling Environment in Nigeria

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Abstract: E-government refers to the government's use of ICT tools particularly web-based internet applications to enhance the access to and delivery of government information and service to citizens, businesses and arms of government. E-governance has emerged as a viable means to address development issues and challenges because citizens find empowerment through access to information. Emerging developing economies such as Republic of Korea, Singapore, and Malaysia have embarked upon e-government initiatives so as to provide a just, fair and equitable governance environment to the governed and they have achieved tremendous success also. However, African countries particularly Western African nations namely Nigeria has lagged far behind. In addition to presenting the concept and an outline of e-governance, the paper compares implementation of e-government in top ranking developing countries with that of African countries, particularly Nigeria with the aim of developing a road map for the speedy implementation of e-government in Nigeria.

Keywords: E-government, ICT tools, Web-site, Internet, Telecommunication, Broadband, Online services, Portal.

1. Introduction

To be educated is to be able to read, write and use the computer -New paradigm

Following the above paradigm, new ICT tools have been introduced to make economic and social institutions more productive, enhance skills and learning, improve governance at all levels and make it easier for services to be accessed. The growth of Information and Communication Technology (ICT) is changing the way economic, social and political development takes place in African Countries. Therefore, the countries in Africa have started implementing e- government initiatives recently using the enormous potential of I.C.T tools and application for the distinct purpose of improving, enlarging and perfecting the governance process. E-government is the use of ICT to transform government by making it more accessible, effective and accountable.

The major objective of e-government is to have SMART governance which means: Simple, Moral, Accountable, Responsive and Transparent governance. E-government is defined as one which is utilizing the internet and the worldwide web for delivering government information and services with an unconstrained and timely access to its citizens. [1] The World Bank refers to e-government as the use of information technologies such as networks, internet and mobile computing by government agencies that have the

ability to transform relations with citizens, businesses and other forms of government. [2] Internet and telephone access and penetration are some of the ICT tools used not only for societal gains but also for faster economic development and better governance. However, according to International Telecommunication Union of UN, internet penetration level has reached 70% in North America as against a low level of 5% in Africa. Realizing this, many developing countries such as Republic of Korea, Singapore, and Malaysia have embarked upon using ICT initiatives for better governance and have been ranked very high in the E-Government Development Index value prepared by the United Nations since 2002. Similar to advanced nations, whose citizens enjoy the benefits of abundant resources, superior access to information and a more participatory relationship with their governments, the above top ranking developing countries have become models to be emulated by other African countries that are lagging behind in e-government initiatives. The problem that is addressed in this paper is to make a comparative study of top ranking developing countries with that of African countries, more particularly Nigerian e-government initiatives with a view to offer remedial measures and applicable framework for laying the foundation for improving e-governance in Nigeria leading to all round development.

2. Objectives

Several basic factors must exist such as financial resources, computer literate human capital, power and telecommunication infrastructure and above all political will and strong commitment of national leadership to maximize e-government's effectiveness and to realize its vast potential. The absence of the above in Nigeria has led to the formulation of following objectives:

1. To find out the challenges impeding an enabling e-government environment in African countries, particularly Nigeria.
2. To examine the core features that are responsible for the successful implementation of e-government initiatives among the top ranking e- government developing countries and to apply them as a model for a better e-governance environment in Nigeria.

3. Methodology and Conceptual Framework

Descriptive Analysis has been used comprising tables and averages to highlight the favourable features of top ranking countries and shortcomings of Nigeria in terms of e-government index value. The panel data has been collated from the United Nations E-Government Surveys.

Several authors have referred to stages of growth models for fully functional and effective e- government. This type of growth model based principle has dominated the theoretical framework used in e-government research papers. [3] Gil-Garcia has pointed out seven stages of e-government growth from evolutionary stage to fully integrated presence of vertical and horizontal integration cutting across boundaries. [4] Further, Elmagarmid also has highlighted that there are four phases of development such as one-way communication, two-way, complex and final integration across all government processes. [5] However, Watson and Mundy have observed that there exists three distinct phases such as initiation, infusion and customization. [6] However, United Nations Survey on E-Government, 2002 listed five phases of comprehensive growth such as emerging, enhanced, interactive, transactional and fully integrated presence. The survey further pointed out that several African countries such as Nigeria, Ghana, Kenya and Zambia have remained in the second stage while top ranking emerging economies such as Korea and Singapore have reached the top stage. [7] Though Culbertson [8] has argued that technological forces are the major propellers of e-governance, Zakareya [9] has attributed e-governance development mainly to organizational and environmental drivers. United Nations has

emphasized that an efficient e-government necessitates application of ICT tools by the government to transform its internal and external relationships. [10]

4. U.N Survey 2002: E-Government among the World Countries

In the last two decades, both internet and worldwide web have added a new and indispensable 'e-governance' to academia, commerce and now to the governance of the country intended to enhance government's efficiency and administrative operations. Consequently, the performance levels of e-governance of the countries around the world have been identified.

Advanced nations whose citizens enjoy the benefits of abundant resources, superior access to information and a more participatory relationship with their governments, rank well above the mean e-government global index of 1.62 prepared by UN to benchmark e-governance and to assess the progress of U.N member states since 2002. United Nations e-government index 2002 has classified the world countries into four groups on the basis of e-government initiatives such as high, medium, low and deficient e-government groups. Many African countries have been classified in the deficient group where emerging presence of e-government has been witnessed with less than 1.00 development index value.

4.1 UN Survey 2010: Top Ranking E-Government Developing Countries

The United Nations E-Government Survey, 2010 has observed that citizens are benefitting from more and improved interaction with governments, primarily as a result of enhanced use by the Government of ICT. High income countries enjoy top rankings as a result of advanced e-service delivery, better access to information, more efficient government management in the e-government development index. The top three are (1) The Republic of Korea with a score of 0.8785 followed by (2) USA with 0.8510 and (3) Canada with 0.8448. The survey pointed out that the world average stood at 0.4406 and Asia remains almost at the world average with 0.4424 and Africa with 0.2733.

Table No: 1. Top Ranking Developing Countries

Rank	Country	E-government Development Index Value		World e-government Development Ranking	
		2010	2008	2010	2008
1	Republic of Korea	0.8785	0.8317	1	6
2	Singapore	0.7476	0.7009	11	23
6	Malaysia	0.6101	0.5819	32	34
World Average		0.4406	0.4514		

Source: United Nations E-Government Development Index Survey.2010

From the above Table: 1, it is inferred that the top ranking developing countries in e-government development index such as Korea, Singapore and Malaysia with a world rank of 1,11 and 32 respectively have invested heavily in online services and ministry portals and websites to offer more services and to engage citizens actively in dialogue with the respective government. This has led to the gradual elimination of the digital divide in Malaysia, Republic of Korea and Singapore who have become world leaders in e-government as a result of integration of back-office operations and provision of e-services to their citizens in a seamless manner.

Republic of Korea: The Republic of Korea's national portal is exceptional in its design and provision of features to its citizens. It is an integrated system of allowing citizens easy

access to government information and contains features for mobile alerts, forms, transactions and online consultation services with the government by name e-people. The aim of e-people is to improve transparency of government administration, improve corruption reporting and engage citizens through petitions, proposals and policy discussions.

Singapore: Singapore's national portal has an organized and effective online approach to providing information to its users through portals and micro-sites. Citizens and residents are directed to E-citizen, an e-services portal that features the personalized single sign-on site for payment services and mobile services. With a mobile penetration rate of 136 percent, mobile services delivery is a strategic initiative of Singapore. Citizens and business houses have expressed high level of satisfaction and enjoy the convenience of accessing more than 300 public services through mobile technology.

Malaysia: Malaysia's SMS system enables users to receive information on demand, documents on demand, ranging from emergency notification to basic notifications. The system allows users to provide complaints to government departments.

U.N. Survey attributed the dismal performance of African countries to non-availability of capital for developing e-government basic initiatives such as building of telecommunication, online service and education for creating a favorable environment for citizen empowerment to narrow the current digital gap.

4.2 Low Ranking E-Government in African Countries

Among African countries, Tunisia stands first in e-governance followed by Mauritius and Egypt. The Western African region scored lowest in 2010 survey due to inadequate financial resources, low human capacity and inadequate telecommunication infrastructure. In this region, Cape Verde tops the list with 0.4054 followed by Cote d'Ivoire with 0.2805, Ghana with 0.2754 and Nigeria with 0.2687.

Table No 4: Poor Performance of Selected African Countries in E-Government Index 2010

S/N	World Rank	Countries	Index value	of which		
				Online service component	Telecommunication infrastructure development	Human capital component
1	117	Botswana	0.3637	0.0680	0.0357	0.2601
2	147	Ghana	0.2754	0.0507	0.0195	0.2051
3	150	Nigeria	0.2687	0.0324	0.0194	0.2167
4	Continent Africa	Africa	0.2733	0.0489	0.0221	0.2039

Source: UN. E-Government Survey, 2010

The dismal performance of some selected countries is shown in the above table no: 4. As against the world average e-government development index value of 0.4406, Botswana's performance is impressive with an index value of 0.3637 when compared to insignificant performance of West African Nations such as Nigeria with 0.2687 and Ghana with 0.2754. Africa as a whole lagged far behind with 0.2733 as against the world average of 0.4406. Though the development of human capital component with a value of 0.2167 is significant, Nigeria has not fared well in the development of telecommunications and in the provision of online services to its citizens. Online services facilitating e- governance are far better in Botswana and Ghana when compared to deficient functioning in Nigeria.

5. ICT in Nigeria

Some countries in Africa including Nigeria do not possess prominent and fully functional national portal or ministry website for finance, education, health, labor and other services. The development process of e-government in Nigeria has been impeded as a result of institutional weakness, insufficient planning, and inadequate systems design and lack of human capital. Many ICT projects remain unfulfilled due to under estimated costs and lack of recurring expenditure. Nigeria has no real e-services and it does not provide citizens with transactional opportunities. World Information Society Report 2007 of ITU has pointed out that none of the African countries is found in the top 100 rankings; with Nigeria occupying 141st position and Democratic Republic of Congo at 183rd level. Similarly, ITU has pointed out that in 2007, internet penetration i.e., internet users per 100 inhabitants has reached a mere 5.9% in Nigeria as against 60% in Malaysia. One of the key determinants of internet penetration is the cost of web access. According to the World Bank, the cost of accessing the internet in India was 8.7 US dollars, while for Nigeria, it was put at \$85.5 and for Uganda it was \$96.8. In view of the high cost, internet penetration remains low in Nigeria.

To strengthen further and to face the immense challenges in ICT in Nigeria, the World Bank offered \$2million investment on facilities to promote growth and investment in ICT projects with the belief that the development of ICT in Nigeria would enhance the enormous potential of employment, income, growth and development. However, it has not resulted in success. Even former Minister of Information and Communications, Prof. Dora Akunyili identified capacity building as the main challenge of ICT and the paramount focus of the Federal Government lies in promoting it towards enhancing career progression and development for a better quality of life that would have multiplication effects on the nation's economy.

6. Lessons Learnt for Creating an Enabling Environment in Nigeria

Indeed, Nigeria is developing in the area of ICT for good governance but there are still some major loopholes which are affecting its total advancement. Considering the impressive performance of top ranking emerging developing economies such as Republic of Korea, Singapore and Malaysia, Nigeria has a long way to go in the context of prevailing factors such as limited access to economic and social infrastructure, inadequate and costly internet, fixed and mobile telephony services and poor broadband service penetration. Development of ICT tools is imperative which not only strengthens e-government but also brings forth, the next new wave of fast growth as witnessed in emerging Asian economies. ICT tools facilitate smooth governance in many ways in Nigeria. Institution and adoption of electronic voting system as is done now in Nigeria will ensure credible elections removing electoral malpractices. Land registration, tax register, personnel management database, pension register and contract tender registers could be carried out electronically, thereby ensuring transparency and accountability. Online service will also help to reduce reckless government spending, open and quite corruption, besides saving cost and time of all stakeholders. The World Bank Report pointed out that employment growth in developing countries remains at 4.5% for the enterprises that do not use ICT tools; and 5.6% growth for enterprises that use ICT tools. Thus, the use of ICT tools has resulted in better growth, job creation, business profitability and labour productivity not only in business enterprises but also in education, health and agriculture.

The national information infrastructure – Singapore ONE (One Network for Everyone), the first nationwide broadband network in the world has reached nearly 100% of households in Singapore and similar network for everyone could be tried in Nigeria also. The possibility of applying ICT tools to governance is not new to Nigeria. Since 2000, the government has approved an ICT policy under the auspices of which National Information

Technology Development Agency (NITDA) was established. However, it was not implemented with a strategic time frame and the leaders have not realized that e-government will bring transformation from a disconnected self-centric government to a connected citizen-centric government, from isolated delivery of services to an integrated delivery of services providing a single point of interaction and affording all the stakeholders the freedom of choice, convenience and control. The absence of the above has resulted in bureaucratic practices of red-tapism, favoritism, nepotism resulting in inefficient and corrupt administrative and political system.

7. Benefits of ICT to Nigeria

An e-government initiative encompasses all sectors and facilitates all round development of the economy by opening up its market within Nigeria and with other countries. By ensuring a fair, just and equitable society, e-government ensures a participatory democracy and formulation of public policy in the governance of the country. It promotes globalization and integration of the economy with the world economy and the global financial market facilitates flow of the much desired foreign capital for generating higher output, income, quality mass education, employment, savings, investment, thereby accentuating reduction of poverty and inequality in income and wealth. In addition to ensuring mass quality education, e-literacy, and e-commerce such as online shopping and banking enhance employment opportunities as well. E-government facilitates bridging the digital divide and more importantly sensitization of the public on the need to protect public utilities which remain as sources of welfare for the poor. As a powerful tool for human development, it is essential for the achievement of the internationally agreed development goals including the Millennium Development Goals. Of late, Nigerians have realized its transformative power in revitalizing public administration, overhauling public management, fostering inclusive leadership and moving civil service towards higher efficiency.

Gender – inclusive approaches to public service delivery is possible and e-government could be effectively leveraged for women's economic empowerment and employment during the crisis. E-health, a process of administering health care, Telemedicine; a process of accessing health care from a distance through ICT tools and M-health; the use of mobile phones for getting health services are the emerging uses of ICT in health care that could be used easily by the government. The benefits are so many such as easy communication, enhanced transparency, accountability, increased opportunity, social inclusion, citizen participation, democratic enrichment, superior governance, citizen-centric cost-effective services, long term economic growth, opportunity to enhance governance through improved access to accurate and transparent information. It provides avenues to improve effectiveness of global competitiveness, growth of technology, service delivery, socio-economic and political stability of the country. [11]

8. Recommendations and Conclusions

Nigeria needs committed political will and strong leadership to bring forward necessary changes in e-government as stated below. Mass illiteracy and the high cost of accessing computers and the internet are the main factors that impede rapid growth of ICT in Nigeria. ICT driven payroll system and pension system has helped the government to save money and the electronic payment has solved the problem of muster-roll scandal and ghost workers. These laudable changes from cash economy to cashless economy in the form of electronic transaction should be introduced in all other financial transactions which will make them easier to audit public funds and track the origins and destinations of each transaction. Besides, this also helps to fight money laundering and financial crimes.

The first priority of the Government is to build computer communication networks all over the country which will establish connectivity across all departments. Once the networks are established, integrated information systems have to be implemented in all the ministries and they have to be updated regularly. To increase internet penetration, the present scheme of Computer for All Nigerians Initiative (CANI) should be fully implemented for improving the ownership of personal computers. The provision of mobile connections should be made cheaper like Malaysia so that connections are augmented further from the present 61.5 million telecommunication lines as on January 2011, providing an opportunity to democratize access to internet technology. There should be a commitment to implement an E-Nigeria Programme, with an initial goal of online publications within 5 years.

At present in Nigeria, for ICT programme implementation, there are three autonomous bodies. For better co-ordination, there is a paramount need to entrust it to a single body, namely NIDTA. ICT programme should include civil service computerization plan for computerizing major functions in every government department, plan for the development of the local IT industry and a pool of IT manpower to meet the future needs of the country. Effective operational computerization programme with bulk acquisition of computer equipments and provision of computer training for all is a must. All institutions should impart computer literacy education for all students. Electronic publication of all documents by federal, state and local governments should be carried out and all websites be constantly updated. Electronic publishing of documents and digital signatures are not admissible as evidences in the court of law. For this purpose, an Electronic Transaction Act on the model of Australia should be enacted in Nigeria also with liberal provision of funding for breaking the existing legal barriers.

Public Libraries which have been established all over the country could become easily de facto e-government access points provided they are funded to equip themselves with necessary infrastructure. Just like Ethiopia where local Amharic language script has been digitalized, Nigeria should also develop its local scripts for digital use for its masses. Capacity building in socio-economic infrastructure particularly in telecommunication, online services, power and human capital is recommended. Tax rebate to the ICT products is one of the measures to bring down the price so as to popularize its use among the public and subsidy on roll out cost to rural areas as well as tax incentives could be used to promote e-government services patronage. Following the example of other African countries such as Botswana and South Africa, Nigeria could also establish a collaborative frame work to partner with European Commission to promote ICT initiatives through research capacity building. In order to achieve all the functions of ICT, the following basic facilities have to be provided with liberal funding: provision of uninterrupted power supply, of sufficient infrastructure for ensuring easy and cheap access to broadband and internet. Nigeria should be interconnected by broadband fibre-optic cable systems or satellite communications that will link them to the rest of the world at a cheaper cost.

Thus, the paper has highlighted the features responsible for the high performance of developing economies such as Republic of Korea, Singapore, and Malaysia and suggested them as models and remedial measures for better e-governance in Nigeria. It is summarized that e-government seems to be a new and emerging phenomenon and for the most part, a nascent activity for African nations. In view of the enormous benefits of e-governments, it is imperative for African countries to overcome barriers listed above such as inadequate human capital, info structure and infrastructure for a fully functional e-government. Further, it is suggested that the government needs to identify and co-ordinate opportunities for collaboration across all departments and monitor the progress made periodically.

The paper has concluded that good governance remains as the ultimate objective of all governments, and e-government has emerged as a viable means to achieve it through

seamless flow and access to information. However, the benefits of e-government will continue to elude Nigeria and all other African countries if the obstacles for favorable e-government initiatives are not addressed adequately and immediately. The government is yet to realize that ICT could be a driving force to the desired socio-economic development and have not paid much attention to its development. Much work has to be done to bridge the digital divide in order to make National governance programme workable, economically sustained, efficient and safe. The country cannot move ahead unless e-government is rigorously implemented. The need of the hour is to follow an old Japanese proverb which advocates; exploit the inevitable, and that is e-government.

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