

E-Government Implementation in Nigeria: Exploring Panacea for Good Governance

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Abstract

The foremost indication of good governance begins with an efficient and effective social service delivery by the state apparatus. This in return calls for the prompt payment of taxes and dues on the part of the citizens. There is a growing consensus that e-government can facilitate a symbiotic relationship with good governance as it is at the heart of an effective and efficient public service delivery and citizens' engagement. Third world nations prominent among which is Nigeria lay claims to e-government adoption without a significant improvement in the quality and medium of social service delivery. Where lays the reason for this backdrop in the result? Using the United Nations Department of Economic and Social Affairs (UN-DESA) 5-Stage web maturity model, this paper evaluates the websites of eight (8) purposively selected Federal Agencies' service portals that constituted the foremost online public service delivery agencies in Nigeria to ascertain the extent of e-Government implementation in the country. Through the domestication of web measurement index of UN-DESA, the study found that all the selected agencies had an average score of 100% at the emerging stage and 50% at the enhanced stage. The agencies had 83.4% at the interactive stage while at the transactional stage; only the Corporate Affairs Commission (CAC) met the minimum requirement of the stage by recording 60%, while none of the forefront federal agencies selected for this study met the minimum requirement of the connected stage of e-government implementation. The paper thus concluded that e-government implementation in Nigeria is haphazard because not all the selected agencies fulfilled the requirements in many of the stages before embarking on the features on the next stages. However, the implementation is beyond the interactive stage, and yet to be established at the Transactional stage.

Keywords: E-Government; E-Government Implementation; Good Governance, Service delivery; Citizens' engagement

Introduction

The reason for e-government adoption varies from nation to nation. To some it is the global trend that must be imbibed while to others, it as an opportunity to enshrine transparency, accountability, efficiency, and effectiveness into the business of governance. Nonetheless, the institutionalization of a quality e-services delivery system that is efficient and effective remains an important attribute of a successful e-government implementation. This is because e-services create the avenue for

engaging citizenry both in governance and in the use of government services. However, the extent of e-government implementation determines the available dividend that an adopting nation enjoys. E-government is therefore not a one-point contact affair but an upgrading trend as demonstrated in the United Nations Department of Economic and Social Affairs (UN-DESA) 5-Stage web maturity model.

The application of computer in the conduct of public business in Nigeria dated back to the year 1948 when the British colonialists installed it at the Nigerian Port Authority. Later in the 70s, the Nigerian government promulgated an indigenization decree that set apart business categories for Nigerians only. In furtherance to this, by the late 1970s, the Nigerian government established the Central Computer Committee (CCC), that was charged with the responsibility of creating standards for users and vendors of computers in Nigeria and develop inputs for the national policy on computing was established. Similarly, the Nigerian Communication Commission (NCC) formed in 1992 was rejuvenated in the year 2000 to roll out several "citizen-centric projects" (Agunloye, 2007) on ICT.

In a planned and coordinated style, the National Policy on ICT was adopted to inculcate ICT into the various sectors of the country also; a National Telecommunications Act was put in place to serve as the regulatory framework for all ICT related issues. In a similar trend, the National Technology Development Agency (NITDA) was established to implement the policy frameworks (NITDA, 2001). The National Rural Telephony Project took the centre point in 2005 to improve access to telecommunication networks in the rural areas. Other initiatives included the Nigerian Telemedicine Initiative, Internet Exchange Point Initiatives, Public Service Network Initiative and Wire Nigeria Initiative (Olufemi, 2012). Interestingly, the launch of the National Service Portal in 2013 marked a significant epoch in the Nigeria e-public service delivery project. The portal offers a number of inter-connections between government Ministries, Departments, and Agencies (MDAs).

Lincoln's dictum, "government of the people, for the people, by the people", has assumed a prominent role in defining democracy and by extension good governance. Yet, the mode of governance across the world is far from this perspective (Parent, Vandebek & Gemino, 2005). Developing countries, in particular, have failed in their mandate of effective and efficient social service delivery, ensuring prudence in public spending despite the bloated claim of e-government adoption. From the UN e-government rating, Nigeria is placed at the Middle Online Service Index (OSI) and e-Government Development Index (EGDI) (Between 0.25 and 0.50) and on "enhanced stage" (UNDESA, 2016 and Reddick, 2010). On a contrary perspective, Hassan (2014) contradicted the submission above as his study revealed that as at the year 2013, Nigeria is already at the connected stage of e-government adoption. Nevertheless, the government has been gearing policy initiatives and enormous fund to accelerate ICT growth in governance.

There is, therefore, the need to investigate the actual stage of e-government adoption in Nigeria in a bid to ascertain the correlation between huge government investment in the e-government project and its current impact on social service delivery. It is within this framework that the need for this study surfaced.

Literature Review

This section attempts a conceptual review of literature with the basic variables in focus

E-Government

In the 21st century society, innovations in information and communication technology have greatly influenced citizens' behaviour as well as their conduct as it has fundamentally challenged how people work and communicate (Wirtz & Daiser, 2015) as well as how governments perform. The concept of e-Government (electronic government) has remained a cogent subject of scientific interest in public administration literature at least for a decade (Heeks, 2006; West, 2005; Garson, 2003 and Fountain, 2001). However, e-government is not constrained to the field of public administration alone, rather it is multidisciplinary in nature as it covers fields like Information System, Political Science, Information Technology and Computer Science. E-Government is still a new phenomenon where ideas are still pouring out from scholars and its practitioners. Thus, it is devoid of a standard and universal definition (Reddick, 2010).

The term e-government can be simply described as summing up 'government-as-usual plus ICT'. E-Government is not about business as usual, instead, it should focus on using ICT to rebrand the structures, operations and, most importantly, the culture of government (Alshehri, & Drew, 2010). Former President, Obasanjo defined e-Government as "the use of information & communication technologies, to improve the efficiency, effectiveness, transparency, and accountability of governance through implementing data warehousing and integrated decision support system to manage the modern economy for the benefit of the governed."

The European Commission (2003) posits that e-government is the use of ICT in public administration combined with structural and skills improvement in order to enhance public services, promote democratic dividends and strengthen support for public policies. Similar to the European Commission's view is the perception of Denhardt & Denhardt (2009) and Olowu (2004) who conceptualize e-government as a tool for service delivery. i.e. the adoption of "all the information and communication technology platforms and applications in the public sector or the use of the internet for delivering government information and services to citizens". To buttress this perspective, Adah (2015) described e-Government as a double-lane communication process that deals with the use of ICT to deliver public services while ensuring unfettered access of such services by citizens. Practically, e-government entails the adoption of new leadership orientation, mechanism of decisions making and investment, new ways of making social services available to citizens, a genuine way of listening and responding to needs of the public in addition to new ways of organizing and delivering public information and services. Dhamodharam & Saminathan (2011) termed e-government as the government's use of ICT tools specifically web-based internet applications to facilitate access to and delivery of public information and service to citizens, businesses and government departments. In the words of Jalali & Khorasani (2012), the idea of e-government depicts service delivery and information exchange both within the organizations (Intra-Governmental) and outside them (Inter-Governmental) that are observed using

various technical tools and is seen as a mutual engagement between government and citizens, non-profit organizations, business persons, employees and the government itself.

Despite the grammatical variations in the submissions of e-government by scholars, presented above, the relevance of technology in social service delivery is central in their ideas. This paper thus adopted the submissions of the European Commission that defined e-government as the use of ICT in public administration, combined with structural and skills improvement in order to enhance public services, promote democratic dividends and strengthen support for public policies.

Implementation stages of e-Government

There have been inconsistencies in the stages of e-government adoption in many literature. However, the UN e-government survey (2004, 2005, and 2008) and Palvia & Sharma (2007 cited in Adah, 2015) spelt out five stages for Web measure index – emerging, enhanced, interactive, transaction, and connected.

In the UN e-government survey of the year 2010, the stages were reduced to four (4) as “interactive” was merged with “transactional,” and renamed “seamless” as “connected,” establishing a four-stage order of emerging, enhanced, transactional, and connected. However, this study will adopt the more elaborate five (5) levels of e-Government adoption.

Emerging stage

This stage is characterized by basic information on public programmes, policy, governance, relevant documentation, and extent of public services available. At this stage, some isolated government websites are provided, and they provide users with simple organizational or political information but without much activity (Adeyemo, 2011). Citizens are easily able to get basic government information in small scope and pertain to only specific issues on what is recent in the national government (Adah, 2015).

Enhanced stage

Government websites create a one-way or simple dual e-communication channel between government and citizens; a few public policy records like e-government policy statements, specific education and health policy records (Adah, 2015). The websites have audio and video capabilities and are multi-lingual. Similarly, Oni, Okunoye & Mbarika (2016) explained that the content of government should be geared towards open administration, publicity and provision of unique and innovative services to citizens.

Interactive stage

In this stage, government presence on the internet expands drastically by moving towards the interactive mode with access to a significant number of government institutions and services (Adeyemo, 2011).

Transactional stage

Public websites engage in dual communication with their citizens, including but not limited to receiving inputs on government policies, programmes and regulations

(Adeyemo, 2011). A significant number of electronic authentication of the citizen's identity is needed to effectively complete the inter-change. Government websites handle non-financial transactions like uploading forms, licenses, filing taxes online and permits. They also process financial transactions on a secured government network.

Connected stage

In this stage, all government institutions, departments and agencies are linked on a single network. Here, duplication of details has been prevented as a central data bank feeds all government outfits. This is the most advance stage of e-government implementation. E-voting, e-learning, e-justice and so on are a few of public services available at this stage.

e-Government Implementation in Nigeria

The innovation in ICT and the emergence of the Internet were strong pushers in the movement from an industrial to an information age (Wirtz & Daiser, 2015). The world has assumed a global village where all nations strive to attain a significant level of electronic governance that involves the use of ICTs to deliver government services (Adah, 2015). Nigeria is regarded as the giant of Africa in the international community; this attachment emanated from her enormous population, considerable landmass and not necessarily because of its advancement in information and communication technology. However, the need to combat rising levels of corruption, inefficiency, and ineffectiveness of the public sector led to the decision to take governance to the next level by ensuring the presence of government online. This is established in a speech of former president Obasanjo when he stressed that his administration has been centred on reorientation and reorganization of the civil service and public officials by changing the business as usual (corrupt, bureaucratic, and inefficient) default system to a transparent, efficient and productive, and participatory one. Moreover, he continued that his administration has taken a bold step to re-engineer the backroom engine to institutionalize an "effective system through computer-assisted modern processes known as e-government" (Obasanjo 2004). In a collaborating view, a top government official in the Ministry of Science and Technology buttressed the need for e-government as a change element in the Nigerian public service. He described e-government as:

...a hurricane that nobody, not even a President can stop. Can you see a President stopping a hurricane? He cannot. No dictator, for instance, can tell you that you cannot send an e-mail... One way to diminish [419] fraudsters are to have proper data and proper documentation which IT [introduces].

Aside the presented political vocal attention paid to the e-government project, history reveals that the application of computer in the conduct of public governance in Nigeria dated back to the year 1948 when the British colonialists installed it at the Nigerian Port Authority. Later in the 70s, the Nigerian government promulgated an indigenization decree that set apart business categories for Nigerians only and the computer business was one such area. This move allows indigenous citizens to set up businesses in the importation and sale of computers

and in the long run, the number of computers in the country experienced a serious boost (UNU, 2004). In furtherance to this, by the late 1970s, the Nigerian government established the Central Computer Committee (CCC), that is charged with the responsibility of creating standards for users and vendors of computers in Nigeria and develop inputs for the national policy on computing. However, the Nigerian Communication Commission (NCC) that was formed in 1992 was reactivated in 2000 and since then the e-government implementation framework has rolled-out several "citizen-centric projects" (Agunloye, 2007).

The National Telecommunications Act was established to serve as the regulatory framework for all ICT related issues. To realize the objectives of the National Policy, the government established the National Technology Development Agency (NITDA), which is under the auspices of the Ministry of Science, and Technology to implement the policy frameworks (NITDA, 2001). The rapid emergence and growth of Information and Communication Technologies (ICTs) in everyday life of citizens has thereby pushed the Nigerian government to transform itself into an electronic government (e-government) to better serve the citizens. In furtherance to the e-government journey, Prof. Akunyili (2010) while delivering a speech at the World Congress on Information Technology in Amsterdam opined that the common characteristic of e-government is the automation of the initial paper-centred processes to enhance access to public services. More importantly, it seeks strengthen government's drive towards efficiency in governance and increased transparency in the management of resources, for national growth and development.

Sequel to the concerted effort of the government in the adoption of e-government between 2011 and 2013, mobile applications and channels that can directly enhance poverty alleviation, gender mainstreaming, social inclusion and disaster management were designed and operationalized. More interestingly, the creation of National Service Portal in 2013 marked a significant epoch in the Nigeria e-public service delivery project. The portal offers a number of interconnection between government Ministries, Departments, and Agencies (MDAs). Comments from unofficial quarters show that the portal has been very helpful in citizens' access to Government services in the short run while it has the potential of facilitating transparency in governance and in the long run, trust in the government.

Nigeria is currently experiencing a slow but steady growth in the ICT sector. However, significant growth is not yet recorded in the use of ICT for e-Government. In a recent ranking by the United Nations in 2016 on e-Government implementation around the world positioned Nigeria on 143rd of the 193 United Nation Member States with the following breakdown: 0.33 on Global Development Index, 0.36 on e-participation index, 0.38 on Human Capital Index, 0.41 on Online Service Index and 0.20 on Telecommunication Infrastructure Index (Knoema, 2016). On the surface, these ratings show that Nigeria is not making commendable progress in its e-government project. This significantly showed that there is either a low level of acceptance of e-Government by the citizens or the e-government implementation standard in Nigeria does not conform to international standard.

This study, therefore, attempts at adopting the UN – DESA's 5-stage web maturity model to ascertain the extent of e-government implementation level in Nigeria and to compare such result with existing international and local acclaimed results.

Methodology

The study will adopt a descriptive design, which involved a systematic collection and presentation on e-government implementation in Nigeria. In conducting the web measurement, the website of eight (8) purposively selected Federal Agencies in Nigeria, which are the Corporate Affairs Commission (CAC), the Nigerian Customs Service (NCS), Federal Inland Revenue Service (FIRS) and the Federal Road Safety Commission (FRSC). In the list also is the National Agency for Food and Drug Administration and Control (NAFDAC), the Nigerian Immigration Service (NIS), the National Identity Management Commission (NIMC) and the National Youth Service Corp (NYSC) will be assessed in line with UN – DESA's 5-stage web maturity model viz: emerging, enhanced, interactive, transactional and connected. Their selection is based on the ground that they constitute the foremost online public service delivery agencies in Nigeria.

The level of e-government implementation for each agency along the 5 stages will be determined by a regular assessment of web features adopted from CPP–BU e-government ranking series, which were blended with UN–DESA's features identified in each of the 5 stages, making a total of 28 features. The features are the availability of the website, availability of contact address/information on the website, provision of basic information about the ministry (about us), the presence of documents, laws, regulations, privacy policy statement, security policy statement, foreign language support, disability access and web personalization. Others are newsletters, audio clips, video clips, reports, downloadable forms, online applications and availability of e-mail contact. Also on the list are; availability of online payments, online access to services paid for, digital signature, exchange of emails across levels of interactions and areas to post comments or lodge complaints. Included are; e-participation and citizens' engagement in decision making, inter and intra agency connections (Government agencies), infrastructure connection, and connections among stakeholders (Government, the private sector, citizens, NGOs, civil society groups etc.).

In the measurement, the researcher worked with 1 assistant to make 2 assessors. Each assessor shall visit the websites of the eight (8) agencies twice a week (Monday and Friday) to observe the 28 features for consecutive 4 weeks (making 8 visits). Each agency will be scored 1 for each of the 28 features if available per visit and 0 if not available. For features that required updating, the agency will score 1 point per feature updated each week and 0 for the failure of an update.

The average score of each website shall be computed to ascertain the actual implementation level each of the selected agencies is at.

Discussion of Findings

At the emerging stage as depicted in Table 1 below, all the selected agencies have all the three features on their websites as they all score 100% of the required 6-pass

mark. It can therefore be concluded from the above that e-government implementation in the selected agencies is beyond the emerging stage.

Table 1: Stage 1: Emerging Stage of Implementatio

INDICES		AGENCIES							
		CAC	NCS	FIRS	FRSC	NAFDAC	NIS	NIMC	NYSC
Web site	2	2	2	2	2	2	2	2	2
Contact address	2	2	2	2	2	2	2	2	2
About us	2	2	2	2	2	2	2	2	2
TOTAL SCORE	6	6	6	6	6	6	6	6	6
Percentage (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Field Survey, 2018

For the enhanced stage, 12 features were examined as shown in the Table below. A maximum of 2 points was awardable for each feature that required no update i.e. presence of documents, laws; regulations, privacy policy statement, security policy statement, foreign language support, disability access and web personalisation. For the features that required update, maximum of 2 points each was awardable during the first week of examination, while a maximum of 3 points each was awardable during the subsequent 3 weeks. The additional 1 point was awarded only where the feature was updated. A maximum of 28 points was awardable in all for the 12 features. However, all the selected agencies had Documents, Reports, Law, Regulations and Newsletters on their sites. In addition, only NAFDAC, NIS and NYSC did not have Privacy Policy statement. Similarly, only NCS has Security Policy Statement, while FIRS, NIMC and NYSC have video clips on their site. It was also observed that none of the selected agencies has Audio Clip, Foreign Language Support, Disability Access and Web personalisation. Conclusively, the agencies recorded different grades in this stage with NCS and NIMC scoring 50% of the total obtainable score. In a similar stance, CAC, FIRS and FRSC scored 42.5% while NAFDAC, NIS and NYSC recorded 35.7% that represented the lowest of the scores.

Table 2: Stage 2: Enhanced Stage of Implementation

INDICES		AGENCIES							
		CAC	NCS	FIRS	FRSC	NAFDAC	NIS	NIMC	NYSC
Documents	2	2	2	2	2	2	2	2	0
Reports (+ Update)	3	2	2	2	2	2	2	2	2

Laws	2	2	2	2	2	2	2	2	2
Regulations	2	2	2	2	2	2	2	2	2
Newsletters (+ Update)	3	2	2	2	2	2	2	2	2
Privacy policy statement	2	2	2	2	2	0	0	2	0
Security policy statement	2	0	2	0	0	0	0	0	0
Audio clips (+ Update)	3	0	0	0	0	0	0	0	0
Video clips (+ Update)	3	0	0	2	0	0	0	2	2
Foreign language support	2	2	0	0	0	0	0	0	0
Disability access	2	0	0	0	0	0	0	0	0
Web personalisation	2	0	0	0	0	0	0	0	0
TOTAL SCORE	28	12	14	12	12	10	10	14	10
Percentage (%)	100 %	42.9%	50%	42.9 %	42.9%	35.7%	35.7 %	50%	35.7%

Source: Field Survey, 2018

It can therefore be inferred from the above that the average score in percentage is 42% and this did not meet the 70% minimum score for the full implementation of the enhanced stage of e-government implementation as stated in the CPP–BU e-government ranking series and the UN – DESA’s 5-stage web maturity model.

In the interactive stage, only three features are under examination and four of the selected agencies, which are the CAC, FIRS, FRSC and NIS scored 100% of the total obtainable points while NCS, NAFDAC, NIMC and NYSC recorded 66.7% each. The average score in this stage is 83.4% and going by the stipulation of the CPP–BU e-government ranking series and the UN – DESA’s 5-stage web maturity model that with 70% of the total score, the agencies are qualified to be described as having fully implemented the Interactive stage of e-government implementation.

Table 3: Stage 3: Interactive Stage of Implementation

INDICES		AGENCIES							
		CAC	NCS	FIRS	FRSC	NAFDAC	NIS	NIMC	NYSC
Downloadable forms	2	2	2	2	2	2	2	0	0
Applications	2	2	0	2	2	0	2	2	2
e-mail contact	2	2	2	2	2	2	2	2	2
TOTAL SCORE	6	6	4	6	6	4	6	4	4
Percentage (%)	100%	100%	66.7%	100%	100%	66.7%	100%	66.7%	66.7 %

Source: Field Survey, 2018

Of all the observed agencies at the Transactional stage in Table 4 below, only the CAC qualified to have fully meet up with the minimum requirement of this stage by recording 60% of the total obtainable points which is above the 50% pass mark. FIRS, FRSC and NIS score 40% while NAFDAC and NIMC did not possess any of the features sought in this stage and thereby recording 0%. The average score is 2.75 and this represents a pantry 27.5%. It is therefore glaring that e-government implementation in Nigeria is not fully entered into the Transactional stage.

Table 4: Stage 4: Transactional Stage of Implementation

INDICES		AGENCIES							
		CAC	NCS	FIRS	FRSC	NAFDAC	NIS	NIMC	NYSC
Online payments	2	2	0	2	2	0	2	0	0
Online access to services paid for	2	2	0	2	2	0	2	0	2
Digital Signature	2	0	0	0	0	0	0	0	0
Exchange of mails across levels of interactions (G2C, G2G, G2E, G2B)	2	0	0	0	0	0	0	0	0
Areas to post comments or lodge complaints	2	2	2	0	0	0	0	0	0
TOTAL SCORE	10	6	2	4	4	0	4	0	2
Percentage (%)	100%	60%	20%	40%	40%	0%	40%	0%	20%

Source: Field Survey, 2018

Table 5: Stage 5: Connected Stage of Implementation

INDICES		AGENCIES							
		CAC	NCS	FIRS	FRS C	NAFDAC	N IS	NIMC	NYSC
e- participation and citizens' engagement in decision making	4	0	0	0	0	0	0	0	0
Horizontal connections (govt. agencies)	2	0	2	0	2	0	0	2	0
Vertical connections (central, regional and local agencies)	2	0	0	0	0	0	0	0	0
Infrastructure connection	2	0	0	0	0	0	0	0	0
Connections among stakeholders (Govt., private sector, citizens, NGOs, civil society groups etc.)	2	0	2	0	0	2	0	0	0
TOTAL SCORE	12	0	4	0	2	2	0	2	0
Percentage (%)	100%	0%	33.3 %	0%	16.7 %	16.7%	0 %	16.7%	0%

Source: Field Survey, 2018

At the connected stage of e-government implementation in Table 5, none of the forefront federal agencies selected for this study is qualified to have met the minimum requirement as only the NCS scored 4 out of the 12 maximum points and this translate to only 33.3% of the total obtainable points. The average score in percentage stood at 10.4%. In view of the data sourced and presented above, it can be concluded that e-public service delivery implementation in Nigeria is haphazard. This is because it did not fulfil the requirements fully in many of the stages before embarking on the features on the next stages. However, the implementation is beyond the interactive stage but yet to be established at the Transactional stage and the government still has a lot to do to fully achieve this feat.

Conclusion

On the extent of e-Government implementation in Nigeria, the study places the country on the interactive stage. The basic reason for this can be attributed to the absence of a database infrastructure that can create a common platform for government MDAs to access, review and authenticate public data. It is important to stress that the NIMC as a data management institution is just working towards the attainment of this. In tangent with this finding is the submission of Adeyemo (2011) who held that the existing government websites in Nigeria only have the capacity for petty exchange of data instead of facilitating a dual means of communication and interaction between the state and the citizens. In a comprehensive report of the UN e-government rating, Nigeria is placed at the Middle Online Service Index (OSI) and e-Government Development Index (EGDI) (Between 0.25 and 0.50) and on "enhanced stage" (UNDESA, 2016 and Reddick, 2010). On a contrary perspective, Hassan (2014) contradicts the above rating as his study reveals that as at the year 2013, Nigeria is already at the connected stage of e-government adoption. Nevertheless, this study has debunked the two submissions as the infrastructure on ground as at the year 2017 is far beyond what is required at the enhanced stage but certainly cannot support the connected stage of e-government implementation in Nigeria.

Recommendations

Based on the foregoing, this paper recommends that all structures of governance in Nigeria should adopt best practices with corresponding ICT infrastructures (state of the art) technology to modernize or digitize processes and/or procedures. In the same way, perceived usefulness and perceived ease of use should form the basis of technology adoption. Legislations in the context of initial and adopted frameworks must be instituted to correspond with global standards and best practices.

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