INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTs) AND PUBLIC SERVICE DELIVERY IN THE NIGERIAN FEDERAL CIVIL SERVICE: OPPORTUNITIES AND CHALLENGES

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Abstract
This study examines the opportunities and challenges of utilizing Information and Communication Technologies (ICTs) as a means of public service delivery in the Nigerian federal civil service. The study adopted the communications theory as its theoretical framework and argued that ICTs present enormous opportunities to enhance public service delivery in the Nigerian Federal civil service. The study therefore, revealed that the utilization of ICTs for public service delivery in the Nigerian federal civil service presents a sustainable and innovative approach to addressing traditional problems of service delivery in the country. The study also revealed that ICTs initiatives for public service delivery in the federal civil service is hampered by many challenges and problems such as lack of ICTs infrastructure; low ICTs literacy and usage; problem of digital divide; inadequate ICTs funding by the government; Nigeria's epileptic power supply; poor institutional governance structure to drive ICTs, etc. Nevertheless, the study argued strongly and concluded that ICTs remain a veritable instrument of enhancing public service delivery in the federal civil service. ICTs have the great potentials to saving costs while improving quality, response time and access to services; improving the efficiency, effectiveness and responsiveness of public administration; increasing transparency in administration due to ease of access to government information, rules and procedures, resulting in openness and accountability; reducing corruption and increasing popular participation; making governments more competitive and reducing bureaucracy; re-engineering administrative processes and modernising service delivery; and bringing about social and economic development.

Key Words: Information and Communication Technologies, E-Government, E-Service, Public Service Delivery, Civil Service.

Introduction
Institutions are central to the development process (North, 1990). The civil service, an institution at the heart of governmental policy formulation and implementation, influences in no small ways, the success or failure of governments. This is why the civil service of any nation is generally regarded as the pivot that will promote socio-economic and political development (World Bank, 1997; Oyeleran-Oyeyinka, 2006). Accordingly, the efficiency of the state is most often predicated on the character and methods of the civil service. This is why Santoy (1957:9), argued that “an efficient civil service, trained in the specialist task of carrying out the broad decision of the government, is a necessity if the government is to fulfil the functions the public expects from it” and that, “no modern state is able to exist without a highly complex and professional civil service organisation”.

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The concept of civil service has no standard definition as domestic laws, practices and conventions influence its definitions considerably (Olowu and Adamolekan, 2002:88-89; Olaopa, 2008:35). The definition of civil service therefore, varies from country to country. The same applies to its organisation and functioning. For the purpose of this study, the Westminster model definition of civil service that Nigeria inherited from British is used. In this model, the civil service refers to the body of permanent government paid officials in core government ministries and departments who are employed in a civil capacity by the civil service commission and whose remuneration is paid wholly and directly out of monies voted by parliament. The civil servants who work in the civil service assist the political executives in formulating and implementing government policies. In general, the civil service is entrusted with the day-to-day business of the state. Although the terms civil service and public service are sometimes used interchangeably, they have different meanings. The civil service is usually used to refer to a body of government officials employed on merit for the purpose of executing public policy or serving the different organs of government, irrespective of the political complexion and ideology of the policy makers. Public service on the other hand refers to the entire system of public management that determine and execute public policies. Public service covers the services of the government in its broadest sense - i.e. public utilities, financial institutions, medical, teaching, local government, legislature, judiciary, military and the security forces.

Studies show that the Nigerian federal civil service was able to provide quality services to the populace immediately after the post-independent years, particularly in the period from 1960-1970 (Olowu, 1990; Adebayo, 2001; Oyeleran-Oyeyinka, 2006). For example, despite the political upheaval that followed immediately after Nigeria's independence in 1960, that eventually led to the Nigerian civil war (1967-1970), the civil service was resilient enough to hold the country together while the political actors were engaged in continuous acrimony. It is to the credit of the civil service that the country fought a three years war without resolving to external borrowing to finance the war. Indeed, during the 1950s and 1960s, the Nigerian civil service was regarded as one of the best in the commonwealth. However, these efforts did not last long. The multiple crises that faced the country thereafter like successive military rule, the global oil shocks of the 1970s and the attendant economic recession also affected the country's civil service vis-à-vis public service delivery (Oyeleran-Oyeyinka, 2006). Accordingly, Nigeria decided to embark on extensive administrative reforms to improve the capacity of the civil service to deliver public service to the populace. Administrative reform is a deliberate, goal-oriented and comprehensive process that involves profound changes in the policies, strategies, and programmes of the public bureaucracy to make it more responsive to the demands of the people. It was evident that the Nigerian civil service needed radical changes. The government needed to respond to widespread poverty and income inequalities by improving its services delivery to the citizenry, and to promote a system of transparency and accountability. However, observations show that the reform measures adopted by successive Nigerian governments over the years have failed to improve public service delivery in the country.

This is why the role of the Nigerian civil service in public service delivery vis-à-vis bringing about socio-economic and political development in the country is now constantly been criticised and despised from many quarters. The Nigerian federal civil service is seen today by many people as an institution that has become unnecessarily bureaucratic, ineffective, sluggish, corrupt, a clog in the wheel of progress, and unresponsive to the needs of the government and aspirations of the people. Overall, it is accused of having abdicated its primary responsibilities and its task as a “machinery for governance and development” (Okunade, 1990:14). Commenting on the state of affairs of the Nigerian federal civil service as far back as the 1980s, President Ibrahim Babangida said:

*The state of affairs in the Federal Civil service today is one of turmoil ... The Nigerian public perception of the civil service has shifted over the years, from that of an object of respect and trust to one of dissatisfaction, suspicion and sometimes, even contempt (cited in Okunade, 1990:16).*

Also, President Olusegun Obasanjo had this to say about the Nigerian federal civil service:

*Government officials became progressively indifferent to propriety of conduct and showed little commitment to promoting the general welfare of the people and public good. Government and all its agencies became thoroughly corrupt and reckless. Members of the public had to bribe their way through in Ministries and Parastatals to get attention and one government agency had to bribe another government agency to obtain*
the release of their statutory allocation of funds (cited in Olaopa, 2008:158).

From the foregoing, it is obvious that the various commissions of inquiry, reform initiatives and renewal programmes embarked upon by successive Nigerian governments over the years like the Morgan Commission(1963), Elwood Commission(1966), Adebo Commission(1971), Udoji Commission(1972), Dotun Philips Reforms(1985), Civil Service (Re-organisation) Decree No. 43 (1988), Ayida Review Panel(1994), Service Delivery Reform(2003), etc, have not done much vis-à-vis improving public service delivery in the country. Indeed, the age long question of how the Nigerian civil service could be made to play its objective role of public service delivery remains unanswered. Public service delivery has to do with the design and provision or delivery of quality goods and services in an effective, efficient and responsive manner to the public as clients, citizens and most importantly as customers. According to Oyeler-Oeyinkin (2006:39), public service delivery is the provision of social and physical facilities that help the physical well-being of citizens and contribute to the economic resources. These services are usually those that the private sector does not want to provide or those that people cannot afford at the given market value of such services or products. The legitimacy of the government is therefore, premised on the capacity of such governments to provide these services through effective taxation. The effectiveness of public service deliveries is the foundation of citizens' trust for the government to govern them (Olowu, 2002:123). Overall, public service delivery aims at instilling quality into government services thereby moving towards a government more in touch with the people.

Information and Communications Technologies (ICTs) is one of the means of Public service delivery in the Nigerian federal civil service. Indeed, ICTs usage is as old as the Nigerian federal civil service. ICTs has therefore, been applied over the years in the Nigerian civil service as a means of public service delivery. The only difference now has to do with the sophistication of ICTs in use in the federal civil service vis-à-vis the ones that were used in the early days of the service. Information and Communication Technologies is a digital way of engaging transaction with customers and clients. It refers to any artifact, technique or knowledge used to create, store, manage and disseminate information (Hewitt de Alcantra, 2001:8). The World Bank (cited in Nweke, 2007a:175) defines ICTs as a set of activities that facilitate the capturing, storage, processing, transmission and display of information by electronic means. For Akunyili (2010), ICTs is an umbrella term that covers all technical means for processing and communicating information. Information and Communication Technologies (ICTs) include telegraph, telecommunications, radio, television, computers, internet services and wireless technologies. Information and Communication Technologies is therefore, a broad subject that is concerned with technology and other aspects of managing and processing large-scale information. This is what is regarded as e-government and e-governance in Public Administration. In this study, we used the concept of ICTs interchangeably with digital technology, electronic government (e-government), electronic governance (e-governance), and digital government.

Digitalized service delivery, though practiced in Nigeria, is essentially an imported concept based on imported designs. An electronic delivery strategy in the civil service is not only about the automation of the current way of delivering services/business. It is about carrying out government responsibility by using collaborative transactions and processes required by the government departments to function effectively and economically, promoting innovation and competition in a bid to improve the quality of services to the citizens. The practices and applications of electronic technology in the civil service in both the developed and developing countries show that it is a powerful means of delivering better quality services, reducing waiting time, red tape, raising productivity and improving transparency and accountability. The extant literature is indeed replete with the great potentials of ICTs tools and applications for operational efficiency, cost reduction, improved quality of services, convenience, innovation and learning in the public sector. ICTs is therefore, believed to offer considerable potential for sustainable service delivery (Ndou, 2004; Eme et al 2007; Nweke, 2007a; Nweke, 2007b).

However, while ICTs in general is seen as an "enabler", it also has its challenges and could be a peril in itself (Ndou, 2004:1). This is why the exact role of ICTs in public service delivery has generated an argument among three groups of scholars namely, ICTs optimists, ICTs pessimists and ICTs skeptics (Arterton, 1987: DiMaggio et al, 2001; Norris, 2001; Katz and Rice, 2002; Bimber, 2003; Park,2007). While the ICTs optimists are of the opinion that ICTs has a positive role to play in public service delivery, the ICTs pessimists argue contrary that the application of ICTs in the civil service can only reinforce and exacerbate existing disparities and problems. The ICTs skeptics on the other hand argue that both the hopes and fears of the optimists and pessimists respectively are exaggerated, as the application of ICTs will make little difference one way or the other. For the ICTs skeptics therefore, ICTs will always adapt to
The social and political status quo. This paper therefore, examines the opportunities and challenges of utilizing ICTs as a means of public service delivery in the Nigerian Federal civil service.

Theoretical Perspective

This study adopts the communications theory as its theoretical framework. Communications theory regards the function of communication as the centre or nerve of all political activity. According to exponents of this theory, an analysis of communications flowing from and flowing into the political system would be very helpful in the description, classification, analysis and explanation of the important aspects of political life. Communications theory therefore, sees communications as the ingredient that makes all systems to perform well. The chief exponent of communications theory is Karl Deutsch. Other scholars that have extended the frontiers of the theory are James Charlesworth, Morton R. Davies, Vaughan A. Lewis, David H. Everson, Joan Papard Paine, among others.

Communication or information dissemination, considered the most important ingredient of the political process, has been largely neglected in political analysis. Communications theory was therefore, developed to fill this gap. The leading exponent of the communications theory, Karl Deutsch, lays emphasis on decisions, control and communications rather than on power which had been the major focus of interest of political scientists. According to Deutsch (1963), it is communications, which is the ability to transmit messages and to receive them that makes organization. Deutsch therefore sought to apply the concepts and methods of modern information technology as well as physiology of nervous system to an analysis of the political system. He particularly introduced the techniques of cybernetics to the sphere of political analysis. Cybernetics is the study of the operation of control and communications systems; it deals both with biological systems and man-made machinery. Deutsch declared that his work was concerned less with the bones or muscles of the body-politics than with its nerves. In other words, his interest lies with its channels of communications and decision.

Throwing more light on the communications theory, Deutsch argues that it might be more profitable to look upon government somewhat less as a problem of power and somewhat more as a problem of steering, i.e. directing the course of its activity, which is the main function of communication. He, therefore, regards political system as a “network of communication channels”. It is largely a “self-regulating” or “self-controlling” system, which evolves its own process and mechanisms for the acquisition, collection, transmission, selection and the storage of information (see Gauba, 2005:98). As Morton R. Davies and Vaughan A. Lewis have aptly elucidated:

*The members of the political system come to acquire mechanisms for the transmission of message and for the coordination and control of the channels of communication. The cohesion of a political system can be analysed in terms of the degree to which these coordination and control mechanisms continue to function properly to adapt themselves, in the context of the goals, which they set to the information, which they receive from various sources; and even to modify the goals which they have set themselves (cited in Gauba, 2005:98).*

For Eminue (2001:105-106), the key idea in communication theory is information, for this is the element that circulates in any communication network. Information can be reproduced, stored, quantified – hence it is measurable, and can be both created and destroyed. In any system, what matters are the nature of networks of information flow; the capacity to receive and combine new with stored information; the capacity to operate as a decision-making entity; and the ability to change its performance by taking into account the result of previous decisions (feedback). Accordingly, the greatest usefulness of communications theory according to Eminue lies in the weapon, which it gives to its possessor to control both the minds of men and the environment.

According to Gauba (2005:99), the problem of communication may be studied in three contests (a) Communication within the political system; (b) communication between political system and its environment; and (c) communication between two or more political systems. Its analysis involves the study of several components, including: (a) the structures meant for sending and receiving messages; (b) the channels used for the purpose of communication (along with their capacities and rates of utilization, expressed in terms of their load and gain, i.e. delay or promptness in responding to the information that is received); (c) processes of storage of information, (d) feedback mechanism; (e) the codes and languages applied for the purpose of communication, and (f) the contents of the messages transmitted, etc.

Communication theory is related to systems theory and according to Everson and Paine (1973), it presupposes that “the extent to which a system approach is successful will be largely dependent upon the
handling of communication variables”. This point is made clearer by Karl Deutsh, the major exponent of the communications theory when he says that:

*If we are to measure information then, we can also measure the cohesion of organizations of societies in terms of their ability to transmit information with smaller or larger ones or distortions in information if we think of an ethnic or cultural community as a network of communication channels, we can measure and transmit information on wide ranges of difficult topics with little delay or loss of relevant details* (cited in Everson and Paine, 1973).

Communication theory in this regard calls attention to the exchange, which occurs between systems or subsystems or politically relevant information within the political system and its environment. In this regards, therefore, it upholds the fact that communication acts as the link between the different elements in the political system and the subsystem within it. Again, it maintains that an analysis of the capacity of the political system to survive stress or to respond to it must be done within the context of its ability to receive, analysis, store, manage and react to communication. It thus, deals with feedback in terms of the way in which the various networks take into account the results or consequences of their actions within or between the systems (Nna, 2000:119 – 120).

However, communications theory understands that communication is by no means a smooth process. This is why exponents of the theory emphasize the importance of distinguishing between what goes out from the source and what is exactly received at the other end – the difference between what a governmental agency says it says, or what the recipient says he hears (Charlesworth, 1967:4). Indeed, as Gauba (2005:99) has rightly observed, if the distortions associated with communication could be corrected appropriately, many problems can be prevented or minimized. This calls for the study of the determinants of distortion in order to understand and correct them.

The key question now is: What is the relevance of the communications theory to this study? Essentially, the communications theory is unique here in three related ways. First, it focuses our attention on the question of how information can be effectively managed in any given political system so as to achieve optimum results. This is fundamental because information is the key element that circulates in any communication network. In any system, what matters most are the nature of networks of information flow, and the capacity to receive and decode such information. Making and taking effective decisions in any organisation is therefore, dependent on the quality and quantity of information received. Accordingly, an organizational system like the Nigerian federal civil service is considered cybernetic in its behaviour with regard to its external environment. This means that it is self-steering, as it develop mechanism to collect, interpret and apply feedback in its decision-making processes so as to acquire the capacity to adapt, evaluate performance and to correct errors.

Secondly, and perhaps more importantly, this theory suggests how any given political system can handle the communication variables for enhanced service delivery. Communication is a cardinal component of human activity. The communication process holds the organisation together in the sense that it provides the means for transmitting information vital to organizational activity and goal attainment. Much of this information is carried along formal lines, while the remainder is transmitted along informal lines. For effective and enhanced service delivery in the Federal Civil Service for instance, it is expected or required that civil servants should be able to communicate effectively among themselves and members of the public. In this regard, communication serves as the link between the civil service and the public by helping to deliver quality goods and services to the populace. There is really no doubt that communication is the centre of all political and organisational activity and distortions or misconceptions about it often lead to problems within the system and its environment. How can one therefore neglect the communication variable?

Finally, any researcher who is interested in finding out how ICTs can enhance service delivery in the public sector generally should rely on the communications theory. This is because the theory offers a holistic, coherent and in-depth explanation of how information and communication flow in any given political system.

From the foregoing analysis, it is our candid view that the postulations of the communications theory is very relevant and apposite in discussing the opportunities and challenges of utilizing information and communication technologies as a means of public service delivery in the Nigerian federal civil service. Indeed, the communications theory is apt, balanced, pragmatic, and provides a good framework for a proper appreciation of our paper.
The Opportunities of ICTs as a means of Public Service Delivery in the Federal Civil Service

Information and Communication Technologies no doubt offer great opportunities for Nigeria and indeed all developing countries vis-à-vis public service delivery, and citizen's satisfaction. This accounts for the link between ICTs applications, optimization of government operations and achievement of important social development goals which is even a very convincing argument for the continued utilization of ICTs in the country's civil service. This is why Gupta and Jana (2003), argued that the application of ICTs in government is no longer seen as an option but as a necessity for all countries aiming at having better and efficient governance. This shows that there is a strong linkage between ICTs application and efficient service delivery. In a study carried out in 2003, the European Commission observed that ICTs application enables the public sector to maintain and strengthen good governance in the knowledge society, create a public sector that is open and transparent, governments that are understandable and accountable to the citizens and open to democratic involvement and scrutiny. It also ensures that the public sector is at the service of all, promotes a productive public sector that delivers maximum value for taxpayers' money, less time is wasted standing in queues, errors are drastically reduced, more ties are available for professional face-to-face service and the jobs of the civil servants becomes rewarding in the process (Nweke, 2007a; 2007b).

Indeed, extant literature is replete with the great opportunities of ICTs as an efficient and effective means of public service delivery. ICTs innovation and revolution has no doubt brought considerable potential to initiatives aimed at fighting corruption and increasing the participation of citizens in the institutions of government. To be specific, ICTs have opened a new e-governance space or route that has huge potential for improving opportunities for the participation of citizens in governmental affairs. This type of setting enhances equity, transparency, accountability, responsiveness, responsibility, effectiveness and efficiency in the manifold transactions that link service suppliers and service recipients (Muchie, 2011:xviii). It has also been argued that the application of ICTs in the civil service can lead to the following outcomes: saving costs while improving quality, response times and access to services (ADB, 2003); improving the efficiency and effectiveness of public administration (Pacific Council, 2002); increasing transparency in administration, reducing corruption and increasing political participation (Seifert and Bonham, 2003), and; making governments more competitive (OECD 2003).

Below, we examine in details the foregoing opportunities or benefits of ICTs application. We decided to summarize them under five headings.

a. Reduced Cost of Administration

The application of ICTs in the Federal Civil Service allows for a significant reduction in information handling cost. This process enables faster sharing of information thereby reducing the frequency with which data is collected when it is handled manually. Obviously, data collected manually costs more due to travel costs and other allowances and expenses. According to Ndou (2004), if developing countries appropriately apply e-government initiatives, it will reduce the number of inefficiencies in processes by allowing file and data sharing across government departments, thereby contributing to the elimination of mistakes from manual procedures and reducing the required time for transactions. It is painful to observe that the cost of running governmental affairs in Nigeria has been on the rise hence the application of e-initiatives in the Federal Civil Service has the capacity of providing cheaper administrative cost due to the digitalization of public service delivery. By this practice according to Nweke (2007b:166), ICTs application in public service delivery reforms public administrative process by streamlining internal processes which enables faster, speedy and more informed decision making and transaction process.

Nigeria is a nation of about 150 million people distributed over a territory of 923,768 square kilometres (Akunyili, 2010). It is therefore easy to imagine the logistic challenge and cost that goes with service provisioning by the Federal Civil Service in the country. The use of ICTs solutions by the service has enabled and will continue to enable it to render public services with greater efficiency and less cost to the ministry and the recipients.

b. Improved, Fast and Accurate Service Delivery

The traditional style of service delivery in the Federal Civil Service is time consuming because of the bureaucratic nature of the Nigerian civil service. ICTs application therefore, helps to reduce waiting time and red-tapism, thereby bringing about fast and accurate service delivery. Public sector organizations in Nigeria like the National Youth Service Corps (NYSC), Joint Admissions and Matriculation Board (JAMB), Abuja Geographical Information System (AGIS) and a host of others have made service delivery to the citizens more convenient, faster and accurate through the digitalization of their operations and
services. For example, JAMB utilizes e-initiatives now to conduct national matriculation examination for admission into Nigerian higher institutions of learning. This yearly examinations that usually involve over one million candidates see scripts computer-marked, and the results released and up-loaded to the website within seven working days. All over the country, what it now takes for candidates to know their results is to visit the internet site of the examination body. The revolutionary dimensions of this ICT-enhanced service can only be appreciated when compared with the former system where the examination results were anxiously awaited by the candidates for close to eight weeks. When eventually released, the notifications were sent by surface mail service through the post office. This created all sorts of mix-ups as some notifications got lost in transit partly because some candidates' addresses would have changed in the interval. Very importantly, manually marked scripts were more prone to errors than computer marked ones.

One can therefore see from the JAMB example that ICT enhances improved, fast and accurate public service delivery. ICT eliminates time-wasting, loss of documents, delay in responding to requests, and kickbacks normally associated with traditional style of service delivery. Even the idea of repeated visits to offices from a far distance, which normally takes a toll on resources, is usually reduced through ICT usage. ICTs also allows for service delivery outside normal office hours. Arguing in this direction, Ndou (2004), avers that e-government initiatives put government services online thereby reducing bureaucratic bottlenecks, offers round the clock accessibility, fast and convenient transactions and obviously enhances the quality of services. Similarly, intergovernmental and international communication relations with other public and private organisations are made faster and convenient. This can be seen on the dominance of e-mails, which have taken over surface mails. In addition, e-government initiatives such as electronic chatting, e-conferencing/video conferencing, etc, are making the public service smarter with reduced risks of travel. These initiatives also enable both the government and the private agencies to have discussions at a distance and at the same time run their respective offices.

c. Creates Access to Transparent, Accountable and Participatory Governance

E-government initiatives have already demonstrated significant capacity for citizens to have greater access to information from public authorities in Nigeria. Public service delivery improves citizens’ participation in public sector management, which is enhanced through ICTs. The opportunity generated in this perspective helps increase the transparency of decisions as citizens and the public servants interact through e-governance process. The citizens and other service recipients are allowed to contribute and exchange ideas and suggestions through electronic forum and websites. ICTs reform which is presently been experienced through e-government initiatives in Nigeria's public administration has created opportunity for public servants and citizens to have access to official information and transaction which were previously classified. This invariably enables the Federal Civil Service to harvest more data from operational systems through increment in the quality of feedback. It is therefore, obvious that government to citizens type of relationships enabled by ICTs application, which before now created suspicion are now reduced as more information are made available through different kinds of on-line communication between the Federal Civil Service and her service recipients. ICTs usage in the Federal Civil Service therefore, enhances transparency, accountability and participatory governance. It also reduces corrupt practices.

d. Enhances Networking and Inter Governmental Relations

ICTs provide and enhance networking of relationships among governments, customers, businesses, employees and other organisations. The successful use and diffusion of ICTs in the public sector involves a collective, multi-disciplinary and dynamic learning process (Mansell and Wehn, 1998). This is the case of such Nigerian public agencies like NYSC, JAMB, AGIS, NOUN, WAEC, NECO, etc, that have fully embraced e-initiatives in the delivery of public services. According to Ndou (2004), the very nature and function of e-governments require network approach to put together skills, technologies, information and knowledge that span the boundaries of different governmental agencies. The application of e-government therefore, enhances the practice of Enterprise Resource Planning (ERP), which is an integrated business system that ties all the various functions of an enterprise like finance, human resource management, etc, into a cohesive system on a common database. In the views of Wescot et al (cited in Nweke, 2007b:168), ERP system may be integrated with the internet and workflow. ERP presents opportunities to the civil service in the areas of financial management, human resources management, records management, material management, etc. The establishment of integrated online network in the civil service therefore, enhances data sharing that facilities feedback. The Organization for Economic Cooperation and Development (OECD) argues along this line when it notes that strengthening relationship between the government and the citizens could improve the quality of services by allowing government tap
wider sources of information, perspectives and solution to meet the challenges of policy making under conditions of increased complexity (OECD, 2001).

In addition to the foregoing, services like attachment mails, online delivery of scanned files, etc, speed up bureaucratic transactions in the Federal Civil Service. The innovations that come with e-initiatives are reducing red-tap and similar lapses that come with traditional means of service delivery. Above all, e-government initiatives in the Federal Civil Service enable civil servants to interact, transact and communicate electronically with business, citizens and other stakeholders. It is therefore necessary to mandate the use of ICT tools and applications for the development of new forms of citizens' participation in the Federal Civil Service.

e. Boosts Competitive and Responsive Service Delivery

The digitalization of operations and services in the public sector in Nigeria means that the public sector is in a healthy competition with the private sector in delivering qualitative and productive services to the citizens. ICTs application in the Federal Civil Service therefore, boosts competitive and responsive service delivery in the country. This development is heart-warming and commendable especially when one recalls that the private sector was on top in the use of ICTs in the country prior to the digitalization of operations and services in the public sector. According to Nweke (2007b:168-169), the Automated Custom Data, Electronic Immigration Passport/Visa Application, Nipost Post Cash, and other similar initiatives are examples of e-government potentials in reforming public administration for increased productivity and competitiveness. In the view of Mansell and Wehn (1998), e-government plays a vital role, not only in facilitating market led initiatives but also in initiating the process of capacity building and in coordinating the actions of a large number of interested stakeholders.

In addition, ICTs usage in the civil service provides structure of opportunities mediating between the citizens and the service using digital information and communication technologies by the government and the citizens. It therefore, implies that ICTs application in the Federal Civil Service brings about citizens that are active, connected and informed. ICTs also help to stimulate exchange of information in which citizens and government relate interactively thereby enhancing productive and responsive service delivery. This also helps to bridge the gap between the citizens and the government.

The Challenges to Public Service Delivery in the Federal Civil Service

Despite the enormous opportunities of ICTs as a means of efficient and effective public service delivery, the situation on the ground in the Federal Civil Service is not quite rosy. There is no doubt therefore, that ICTs initiative as a means for administrative reform in the Nigerian civil service, which is heralded as the new way for improving service delivery is threatened. Sadly, this is the situation in many developing countries. This is why Waema (2011:25), observed painfully that most e-government projects or initiatives in Africa have not achieved the often quoted outcomes. According to him, the Gartner Group in 2002 reported that "more than 60 percent of all e-government initiatives (in Africa) either fail or fall short of expected outcomes". Saxena (2005), subsequently argued that in spite of the worldwide diffusion of e-government initiatives, achieving the claimed benefits of e-governance has not been easy due to various technological and organisational reasons. Heeks (2003), had also noted that e-government projects often fail either totally or partially to achieve their objectives, despite their initial successes. He observed that in developing countries, the implementation of e-government fail, with 35 percent being classified as total failures and 50 percent as partial failures.

The foregoing is a challenge and a disturbing fact for a developing country like Nigeria that has many limitations. As such, critical issues have to be addressed in order to scale up and enhance ICTs usage as a means of service delivery in the Federal Civil Service. The area that deserves urgent attention and political commitment according to Nweke (2007b:169), revolves on the following issues: political will, infrastructure, skills, change and public confidence.

Indeed, available literature is replete with many challenges that developing countries like Nigeria face vis-à-vis the application of ICTs as a reform model for public service delivery. The following are some of the challenges confronting the Federal Civil Service and indeed many developing countries in their efforts to utilize ICTs to deliver efficient and effective service to the citizens. They are challenges of leadership and lack of political will; lack of infrastructure; lack of ICTs skills; attitudinal change for adoption; lack of public confidence in ICTs; safeguarding of public document/secret; lack of confidence in online interaction with government; epileptic power supply; problem of digital divide; high cost of ICTs and affordability; resistance of mind set of people; lack of comprehensive national policy on ICTs; Nigeria's low e-readiness; low ICTs literacy and usage; lack of ICTs units and functions; limited, slow or
non-existent internet connectivity; inadequate ICTs funding, and; poor institutional governance structure to drive ICTs (see Aicholzer and Schmutzer, 2000; Heeks, 2003; Jeremy et al, 2004; Bhatnagar, 2004; Saxena, 2005; Ndou, 2004; Misuraca, 2006; Eme et al, 2007; Nweke, 2007a; Nweke, 2007b; Nweke, 2011; Adeyemo, 2011; Waema and Adera, 2011; Komba and Ngulube, 2012; Mutula, 2012; Nzimakwe, 2012; Mpinganjira, 2013; Elkadi, 2013; Akcura and Avci, 2014). We will now examine in details the foregoing challenges of ICTs implementation in the Federal Civil Service as mentioned above. Again, we decided to summarize them under five headings.

a. Challenges of Leadership and Political Will

Problems of leadership and political willingness are indeed a great variable constraining ICTs initiative and application in the Nigerian civil service vis-à-vis public service delivery. Like other developing nations, political influence, lack of accountability and transparency, problem of corruption, etc, are threats facing the management of e-government in the public sector of Nigeria. This condition of affairs is supported by Ciborra(2005), who argues that the notion of e-government on its own is not suited for developing countries who want to obtain the associated benefits. According to him, political and social changes are required alongside the implementation of e-government in the developing countries. He adds that failures due to governance breakdown, corruption, rent seeking, distortions in markets and the absence of democracy should be addressed before e-government can be implemented in developing countries. The willingness of public officials and leaders is therefore, a key factor in every new initiative such as e-government.

According to Nweke (2007b:169-170), given its complex process, risks and challenges, public organizations as well as their leaders have resisted e-government initiatives due to ignorance, policy issues and obsolete rules and regulations. This is why Ndou (2004), maintains that leadership is necessary before, during and after project implementation. Beside, the leader is required during the implementation of e-government initiatives to manage change and provide for feasibility and adaptability of the programme. This is why McClure (2001), argues that top leadership involvement and clear lines of accountability for making management improvements are critical to overcoming organisations natural resistance to change, marshalling the resources needed to improve management and building and maintaining the organisation wide commitment to new ways of doing things. In Nigeria unfortunately, the leaders have not demonstrated enough commitment towards the utilization of ICTs to deliver public service in the country's civil service. The Federal Civil Service is still at the stage of web presence. Even then, most of the websites of government ministries and departments are characterised by static and insufficient information that are rarely updated, few interactive features and non-existent online services. The insignificant interest of the political leaders has greatly reduced the potentials of ICTs enhancing public service delivery in the Federal Civil Service.

It must be mentioned here that the Nigerian government has in the last couple of years take steps at the federal government level to give the country a sense of direction and harmonize the efforts of the disparate organisations and stakeholders in the development and utilization of ICTs in Nigeria. The Federal Executive Council (FEC) approved a National Information Technology Policy in March, 2001 and began its implementation with the establishment of the National Information Technology Development Agency (NITDA) in April 2001. The government has also recognized the private sector as the driving engine behind the ICTs sector. Basically, the National Information Technology Policy is targeted at using ICTs to achieve vision 20:2020, Nigeria's Millennium Development Goals, NEPAD development initiatives and the world summit on information society's plan of action. It also contains actionable programmes for short, medium and long terms to be implemented by identified stakeholders in conjunction with local and/or international private organizations (Adeyemo, 2011:17). NITDA on its part has embarked on a number of projects that are making the dream of using ICTs for development real in Nigeria. The Public Service Network (PSNet), Mobile Internet Unit (MIU) and Human Capacity Development are some of these projects. In the last few years also, NITDA has committed a lot towards ensuring that the civil service, particularly those in the top echelon of the service embrace ICTs. These efforts have been most encouraging and rewarding (Afolabi, 2010; Adeyemo, 2011).

NITDA has also made progress through the establishment of Galaxy Backbone in line with the National IT Policy. Galaxy Backbone was established in 2006 as a Government owned company and charged to deliver connectivity and other information and communication technology infrastructure to Ministries, Departments and Agencies (MDAs) of government. Currently, it has up to 300 MDAs connected to its ONEGOV.net network in over 3000 office locations nationwide making it the largest single network ever developed in the public sector in the country. Today, Galaxy Backbone has gone into a partnership with a private company, Main One Cable Company, to enhance broadband access in the public
service. Main One Cable Company is a product of the efforts to grow the private sector and create an enabling environment for economic and technological development. Main One Cable Company has already developed the Main One Optic Fibre cable system which is capable of transmitting and enabling access to broadband internet at a speed of almost 5 Terabytes per second which is much faster than what is currently available in Europe - and will deliver up to 10 times more capacity than what is currently here in Nigeria (Afolabi, 2010).

One can see from all the foregoing that government has indeed taken some concrete steps to enhance the development and utilization of ICTs in the Nigerian civil service. The point however remains that Nigerian leaders have not demonstrated sufficient commitment towards the development and utilization of ICTs in the country's civil service. This is all obvious considering the fact that the government is still faced with management challenges in the implementation of e-government. Even the uncoordinated nature of e-government activities results from this same problem of lack of political will by the leaders. There is also the problem of insufficient allocation of financial resources and mixed or overlapping government policies that have all slowed down the development and utilization of ICTs in the Federal Civil Service. Although these challenges could be considered as part of Nigeria's poor e-readiness, it is an important issue in its own right as nothing can be meaningfully achieved without financial resources. One can therefore, see that leadership remains the greatest challenge facing the utilization of ICTs in the Federal Civil Service.

b. Problem of Digital Divide

Digital divide refers to the gap or inequalities between people who have the resources and access to ICTs and people who do not have the resources and access to the technology. The term also describes the discrepancy or gap between those who have the skills, knowledge and abilities to use ICTs and those who do not. In Nigeria today, digital divide is experienced between the urban rich and poor; between the rural and urban citizens; and between the ICT literate and the ICT illiterate. This manifests also in the language in which ICT content is delivered which can only be understood by a minority few. Many Nigerians are poor and live in rural areas and as such lack access to ICTs. This means that these categories of Nigerians might not obtain important government information and services, or even consider participating in online interactions with the government. Poor and disadvantaged groups, particularly women often face special constraints in accessing ICTs and using them for their specific needs. Unequal access can therefore, worsen existing inequalities. The risks of economic exclusion suggest that the Nigerian government should be concerned with the level of connectivity and ICTs provision and with how to enable access and deploy ICTs and its content in ways that expand relevant information for the poor, increase their voice in decision-making and address bottlenecks to their lives (Hanna, 1991).

The high cost of ICTs equipment and services constitute key constraining factor in the country. There is also the problem of digital divide between Nigeria and the developed countries who are of course the manufacturers of these technologies. Nigeria presently does not manufacture most of the ICTs infrastructure needed for e-government hence she has to rely on the developed countries. And as Tapscott (1996), has observed, infrastructure is required to enable ICTs provide appropriate sharing of information and open up new services. In addition, the slow rate of software development in Nigeria, which is a key component of infrastructure, remains a threat to e-government initiatives in the Federal Civil Service. A study carried out by Soriyan and Heeks (2004), puts software firms development in Nigeria at: Service imported applications (51%); Developing and servicing local applications (25%); and Servicing and developing local and imported applications (24%). What the foregoing means according to the study is that three quarter of firms in Nigeria relied wholly or partly on services, such as installation or modification, related to foreign packages. There was no indigenous development of software tools, and there was certainly a perception of growing penetration of the market by foreign products that were displacing locally developed applications. The implication is that focus shifted to training or internet based services. The findings of this study no doubt pose danger to e-government and other ICTs policies for service delivery in the Nigerian civil service.

Indeed, the challenge posed by digital divide has to be taken into serious consideration by the government if Nigerians must benefit from ICTs application in the civil service. An e-government site in the federal civil service that provides web access and support often does not offer the potential to reach many users including those who live in remote areas, have low literacy levels and those who exist below poverty line incomes. A World Bank Report (2003), observed that the gap between developed countries and the developing ones is large with high income economies having 416 personal computers per 1,000 people and low income economies having only 6 personal computers per 1,000 people. This is indeed disturbing. Is it not possible that the application of ICTs in the Federal Civil Service will benefit the rich
and those who are connected against the poor in the country? What this simply means is that the government must put strategies in place to ensure that all citizens have equal access to ICTs usage in the civil service. This is important because countries of the world today have recognised that ICT is a critical or strategic resource in national development.

c. Low ICTs Skill, Literacy and Usage

Besides the problems of leadership, digital divide, and the dearth of ICTs infrastructure in the country, e-government initiatives in the civil service lacks personnel with the requisite ICTs skills needed for public service delivery. Regardless of the existence or sophistication of ICTs, human beings remain the most critical success factor. They are the users and creators of data. They are the managers of the technology. The UN and ASPA (2002), see this particular problem of lack of qualified staff and inadequate human resources training as pervasive and chronic in many developing countries for many years now. The problem hinges on the unavailability of human capacities that have the technical skills for installation, maintenance, design and implementation of ICTs infrastructure.

Indeed, the problem of low ICTs skill, literacy and usage impacts negatively on Nigeria's e-government readiness. E-government readiness is a comparative ranking of the countries of the world by the United Nations Public Administration (UNPA) Network according to two primary indicators: (i) The state of e-government readiness; and (ii) The extent of e-participation.

Constructing a model for the measure of digitized services, the UNPA survey assesses the 191 member countries of the UN according to a quantitative composite index of e-government readiness based on website assessment; telecommunication infrastructure and human resource endowment. It is sad to note however that Nigeria just like many other developing countries has persistently ranked low in the UN e-government readiness index (Adeyemo, 2011). The key issues leading to the low e-government readiness in Nigeria are lack of technical ICTs human capacity; low ICTs literacy and usage; lack of ICTs units and functions; little or no access to ICTs infrastructure; and limited, slow and non-existent internet connectivity.

Apart from lack of technical ICTs skills in the public sector, which affects Nigeria's e-readiness, the civil service does not have the requisite in-house managerial ICTs skills. In addition, it lacks the training programmes to create a sustainable pool of staff with basic ICTs literacy, technical and managerial skills. The main consequence of this problem is the tendency to use external consultants and contractors, which makes ICTs application very expensive in the civil service.

One can see from the foregoing that human capital development is a vital prerequisite for e-government application in the federal civil service. This has become even more necessary considering the low qualification of ICTs personnel and professionals in Nigeria. The same study by Soriryan and Heeks (2004), shows the qualifications of ICTs personnel in Nigerian software firms as: secondary school qualifications only (15%); first degree or diploma or equivalent (36%) first degree plus masters degree (23%); first degree plus masters plus professional qualification (23%); and PhD (3%). The foregoing figures show signs of low and inadequate ICTs personnel and professionals in the country. This also goes a long way in explaining why most e-government initiatives and facilities in the civil service such as computers and telecommunication equipments are fast becoming decorative ornaments in offices as the human capital required to use them are lacking. To get out of these low ICTs skills, literacy and usage in the Nigerian civil service, Ndou (2004), suggests addressing human capital development issues. Those saddled with the responsibilities of managing the affairs of the civil service should therefore, focus attention on staff training and development in order to help civil servants acquire the required skills and knowledge needed for e-government application in the service.

d. Problem of Adapting to Change

Problem of adapting to change is another key challenge to ICTs application in the Federal Civil Service. Change is one phenomenon that is permanent or constant in nature but always difficult to be followed due to resistance. Resistance to change associated with ICTs application in the civil service comes about due to factors such as culture, labour, ideological issues and inertia of the options and habits (Nweke, 2007a:190; 2007b:172). Among the foregoing factors, culture is the most challenging. The most evident cause of resistance to ICTs application in the service is obtainable among civil servants who do everything possible to oppose the change of processes or practices that have existed for years. It is this resistance to change that makes civil servants in Nigeria to be reluctant to share information thereby resulting in policies that deny access to information and the creation of empty government websites with information of little value.

In a study carried out in India, Bhatnagar (2004), observed that resistance to change from public staff was one of the major problems encountered in e-government implementation in the Indian public
service. According to him, the staff of the revenue department were the people who resisted change the most as they stood to loose the income received from bribes. Some staff feared job losses, while others were reluctant to learn and use the new technology and new work practices. Several meetings and performance reviews were therefore, organized to persuade staff to become accountable and to motivate them for better performance. To make e-government realize its potentials in Nigeria, Nweke (2007a:190; 2007b: 172 - 173) has advised that the prospective users of the ICTs infrastructure should be re-oriented in line with new technological development in the public service. Equally, due to the difficulty in turning off old traditions and ways of life, incentives and benefits are recommended for the transiting employees to learn and accordingly change to attributes that would enhance e-government ideals in the public sector. Akunyili (2010), writes that as a way of tackling the problem of resistance to change in the Nigerian public service, the government has continued to place emphasis on cultural change to ensure civil servants buy into the new technology driven processes, rather than manual ones that have been in place for many years. There is also the need according to her for consolidation of information and cross-sectoral collaboration in order to ensure that the entire civil service and other agencies of government share information and resources to ensure that policy design and implementation are driven by holistic perspectives.

e. **Lack of Public Confidence and Trust in Online Interaction with Government**

The last challenge of ICTs application in the Federal Civil Service that we discussed here is the problem of lack of public confidence and trust in online interaction with the government. Many people in Nigeria do not have confidence and trust in e-government initiatives in the civil service. This has to do mainly with questions of data protection, network and information security. Indeed, the rate with which people abuse online information and communication scares both individuals and public administrators alike from depending on ICTs. The activities of cyber criminals and hackers have continued to be on the increase in Nigeria. The presence of JAMB, NECO, WAEC and similarly establishments online in Nigeria has led to the forging of documents since users now take results and documents online. The foregoing scenario compromises personal data, authentication of data and identity management. The Green Paper on E-Commerce (2000:47) advocates that government regulation could play an important role through specific legislation with respect to enhancing users' sense of privacy protection in online interaction.

Indeed, the difficulty that comes with securing public confidence and trust in online interaction with the government remains a threat to ICTs application in the civil service. Some civil servants in Nigeria even resist e-government initiatives in the service based on this factor. According to Nweke (2007a:191; 2007b:173), if ICTs application in public service delivery in Nigeria must receive boost, citizens and government should always be able to control access to their data, and how these data are stored, used, accessed and protected. To this end, the use of privacy enhancing technologies should be favoured to avoid breaching the law. These considerations are necessary to raise confidence and trust among Nigerians in embracing ICTs in public service delivery and accordingly reduce the resistance that comes with ICTs application in the civil service.

Despite all the foregoing challenges and threats to ICTs initiatives and application in the Nigerian federal civil service, factors such as increasing computer ownership, literacy and usage in the country, falling costs of communication, increasing use of mobile telecommunication and other ICTs gadgets, increasing internet connectivity, increasing demand for mass personalisation of e-initiatives like e-mail, facebook, twitter and websites accounts, and the incidence of globalization are all prove or evidence that ICTs usage in the Nigerian federal civil service and indeed the entire public service has come to stay. The way forward now is to maximize its great opportunities while at the same time minimizing and managing effectively its shortcomings and challenges.

**Conclusion and Recommendations**

It is all obvious that ICTs present enormous opportunities to enhance the delivery of public service in the Federal Civil Service as argued by the ICTs optimists. Today, ICTs usage in the Federal Civil Service remains a key factor in enhancing public service delivery in the country. Developments in ICTs today have dramatically changed the way information is collected, stored, processed, disseminated and used, thus making it the most powerful tool for modernisation and development. ICTs application in the public sector has emerged as one of the key initiatives that enhance equity, transparency, accountability, responsiveness, responsibility, effectiveness and efficiency in the manifold transactions that link service suppliers and service recipients. In deed, ICTs application in the public sector is no longer seen as an option today but as a necessity for all countries aiming at improving public service delivery. The investment climate in any country today is even partly dependent on the e-government readiness index of the country.
No doubt, the ICTs revolution has opened up vast opportunities to meet the intractable challenges and difficulties that have confronted the Nigerian civil service since the 1960s. One of the thorniest challenges of the Nigerian civil service has been how to deliver efficient and effective public service to her service recipients. Finding ways to deal with this intractable challenge has been the priority concern of successive Nigerian governments who have over the years instituted one administrative reform or the other. Sadly, however, most of these administrative reforms have been abysmal failures vis-à-vis public service delivery. This paper therefore, argued and concludes that ICTs present enormous opportunities to enhance the delivery of public service in the Federal Civil Service. The usefulness of ICTs lies in its complementary relationship with other options that are available for improving public service delivery. This suggests that a stand-alone role for ICTs application in fixing the intractable problem of service delivery in the Nigerian civil service cannot work.

However, the main challenge of ICTs implementation in the Federal Civil Service is the low nature of its usage which arises due to some of these challenges: lack of ICT infrastructure; challenges of leadership and lack of political will; low ICT skills, literacy and usage; problem of adopting to change; Nigeria’s epileptic power supply; problem of digital divide; lack of public confidence and trust in online interaction with the government; high costs of ICTs and affordability; Nigeria’s low e-readiness; lack of ICT units and functions; inadequate ICTs funding by the government; and poor institutional governance structure to drive ICTs in the civil service. All these challenges have indeed combined to hamper the enormous opportunities of ICTs as a means of efficient, effective and responsive public service delivery in the Federal Civil Service. There is therefore, the urgent need for the government and those concerned to concisely tackle these challenges so as to enhance the potentials of ICTs to deliver efficient and quality services to the service recipients of the Nigerian Federal Civil Service.

Another challenge of ICTs implementation in the Federal Civil Service is whether the intended objective of reaching the citizens is actually achieved. ICTs application in the Federal Civil Service should reach all the people who need their services regardless of their location. This can be achieved by the provision of adequate ICTs infrastructure, improving online services and citizens access to these services and the civil service dedicating itself to improving the skills and literacy level of its staff. Overall, Nigerians in general will benefit more if the civil service critically examines its present ICTs state and then identifies those areas that it needs to improve on. ICTs infrastructure cannot work with out a regular source of power supply. More efforts should therefore, be devoted to improving the country’s epileptic power supply. The nation still needs to commit more resources into the development of its human capital, address the internal digital divide between its literate and illiterate citizens, while the websites set up by government ministries, departments and agencies should be integrated and reviewed to make them e-service complaint within the context of a national portal.

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