

INFORMATION AND COMMUNICATION TECHNOLOGY AS A TOOL FOR ECONOMIC AND POLITICAL ADVANCEMENT IN NIGERIA

Agbonifo, Oluwatoyin Catherine

**Department of Computer Science,
Federal University of Technology, P.M.B 704, Akure, Nigeria
montoyaan@yahoo.com**

Abstract

Information and Communication Technology (ICT) has been of great importance to almost all aspects of any national advancement. The usage of ICT will go a long way in promoting the economic and political advancement of Nigeria if adequately deployed. This paper explores how ICT as a supported tool can reform and increase the efficiency of the economic and political wings of Nigeria. It highlights some of the challenges and suggestions that need to be addressed in implementing a comprehensive and successful ICT reform plan.

Keywords: Information and Communication Technology, national advancement, economic and political advancement

1. Introduction

The role of Information and Communication Technology (ICT) in everyday human activities has transformed everything that relate to human likelihood, society, agricultural, climate etc. Nwabueze and Ozioko (2011) stated that the advancement of any nation is usually barometer by the degree and extent of the sociocultural, socioeconomic, and political improvement that are brought to bear through the enterprises of science, technology and mathematics. The researchers stressed that advancement is a function of the advancement and application of science and technology. The role of technology in improving the lives of the people cannot be underestimated. According to Ebeling in Kehbama (2005) stressed that most people now buy goods and services online, sending messages across the globe and receiving instant replies. ICT has enabled expansion in business initiatives globally.

Osabuohien (2008) defined ICT as the use of electronic components for storing, analyzing and distributing data; and having a dramatic influence on almost all aspects of individual lives and that of the national economy. The researcher further stressed that increasing use of ICT has allowed for integration of different economic units in a spectacular way. This reflects that the more the technology tools for information and communication, the more the advancement of a society. Apart from its reliance on technology, ICT for advancement entails an understanding of community advancement, agriculture, healthcare, poverty and basic education. ICT should be seen as an instrumental icon that is needed for the gathering of information and knowledge.

Prior to 1999, penetration and usage of ICT resources and facilities in the rural and urban areas in Nigeria were considerably low. This was mostly due to inadequate ICT infrastructure and

services. For example, the former Nigeria Telecommunication Limited (NITEL), a government owned Limited Liability Company and a national monopoly operator whose objective was to harmonize the planning and coordination of the internal and external communications services. But, NITEL was synonymous with epileptic services and bad management which made telephone them to be unreliable, expensive and unfriendly with customers (Bakare and Lola, 2011). In 2001, Global System for Mobile communication (GSM) was introduced and license was given to GSM operators. The introduction of ICT policy by Federal Government of Nigeria, more GSM operators and Internet service providers were given license to operate. This significantly opened up market competitiveness among the operators and automatically increases the rate of mobile phones and Internet subscribers. Mobile communication and Internet services have indeed transformed business in Nigeria as people can transact their businesses from anywhere such as homes, offices etc. without any form of restriction through the use of these facilities. There are differs ways payment could be made through these facilities such as GSM and Internet payment systems. This has contributed tremendously to job and wealth creation and reduces unemployment rate (Oye et al., 2013) and strengthen the economy of the nation.

There is more to be done in Nigeria politics and the ICT industry is anchoring major roles towards this direction. The establishment of National Information Technology Development Agency (NITDA) is being empowered by law to drive ICT growth in Nigeria. It was reported by Senior IT agency that the organization has made the move in ensuring the legislative arm of government is well equipped with necessary ICT tools to enhance their duties and increase productivity (NITDA, 2014). The use of ICT would contribute immensely to ensure a justifiable and successful electoral process in providing ICT solutions to combat the issue of electoral malpractice.

2. ICT Resources for National Advancement

There are several ICT resources and facilities that enable national advancement, but few will be discussed in this section according to Attama and Owolabi in Nwabueze and Ozioko (2011).

- a. **Computers:** Computers have transcend beyond performing number crunching, they can handle different operations more efficiently as regards to information generation, analyzing, storage, information retrieval, knowledge discovery and communication for sustainable advancement. The features that characterized them as technological tool for usage are speed, reliability, accuracy etc. Exploration of this tool has brought technological advancement resulting in globalization and digital convergence.
- b. **Internet:** The advent of computer networks brought about the emergence of Internet which had transformed the world into a global village. Through this, knowledge society is opened to technological competitiveness which is an added advantage to embrace a phase lift in technological advancement to promote socio-economic and political transformation. Nwabueze and Ozioko (2011) stated that the potentials of the internet lies in the provision of global platform for information sharing among organizations and individuals which creates awareness, ensures continuous use of products and services, provides feedback and support for organization. The importance of this is that any

organization or government that has current and useful information is empowered to enhance productivity and good governance. The Internet has become an invaluable bridge for Africans and other continents to regroup and discuss social, political, cultural, and economic issues facing them at home and abroad (Kehbuma, 2005).

- c. **Email:** This is one of the widely used resources on the Internet which provides sending and receiving messages in an asynchronous mode through electronic devices. With this, intra and inter organizational communication is made faster and cheaper compared to traditional means of exchanging messages. E-mail has become the life-wire for many business and organizational communication.
- d. **World Wide Web (WWW):** This is Internet-based resource that supports specially formatted documents. The documents are formatted in a markup language called Hypertext Markup Language (HTML) that supports links non-linearly to other documents as well as graphics, audio and video files. According to Chilvetalu in Nwabueze and Ozioko (2011) stressed that website hosted on the Internet helps individuals or organizations to locate products, information and pursue political or social agenda and transact business. It is of the right perspective for any nation or organization to be located on the Internet because it would make for right course of speed in global competitiveness for sustainable advancement in line with the emerging changes in technology, economic and political paradigms.

3. Impact of ICT on Nigerian Sectoral Advancement: Case of Economic and Political Sectors

ICT is a tool and not a solution. Advancement is not about technology or information but it is about economic, social and political empowerment. Advancement is a unique feature that should take place in an individual, nation, or organization or whatever that can be characterized as entity with certain attributes and defined projection. When advancement stops, then deadness will creep in and decadence, uproar, backwardness, oppression will become the order of the day. Economic advancement is seen as unrelenting and concentrated actions of policy makers and communities that promote the standard of living of the citizenry and make the communities to compete globally. Economic advancement is a policy intervention endeavour which is aimed at economic and social well-being of people. Economic growth on the other hand is a phenomenon of market productivity and rise in Gross Domestic Product (GDP).

According to Christopher and Stefan (2009) stressed the notion that research on economic advancement has raised up with questions of political economy and in particular with political choices, institutional structures, and forms of governance influence the economic choices made by governments and citizens. That many of the deep issues associated with advancement are firmly rooted in the narrower economic challenge of promoting and sustaining high economic growth. The political economy of advancement is inextricably tied to the narrower notion of the political economy of economic growth. The domestic attributes of constitutional order and political stability are attained through the formation of a settled framework of government, reliable procedures for leadership succession, and a consolidation of the territorial administrative

reach of government institutions. The roles of ICT in these sectors are discussed under the following sub-headings:

a. Oil and Gas Industry:

The role of ICT is of great importance to almost all aspects of oil and gas operations, from upstream to downstream operations. It assists to optimize oil and gas processes and improves the efficiency and viability of oil and gas operations. Upstream operations include exploration and production of crude oil, and a major challenge in upstream sector is how to extend the life of crude oil reserves or increase the oil production in order to keep up with the increasing demand for oil. The oil fields components have become part of ICT network where such components including oil wells, pumps, pipeline and oiling are interconnected with each component having an IP address. ICTs make it possible to collect huge amounts of data concerning oil fields, with manipulation of those data in models which support decision making with respect to optimal oil recovery methods. Downstream oil operations include transportation, refining of crude-oil, marketing and distribution of its end products. ICTs allows for the storage and manipulation of the different levels of data (crude-oil prices, inventory, delivery costs etc.) on purchasing, delivery of crude oil, refining and distribution of end products. ICTs are used in refineries to enhance technological processes and to increase the yield of oil products with minimization of harmful emissions. ICTs are used in transportation and distribution to prevent losses and helps to optimize the stocking and final delivery of oil products to end users (Dike et al., 2013).

b. ICT in banking sector/Internet banking:

Several policies for financial sector reforms have emerged in Nigeria banking sector to improve relatively the strength of operations in banking system for high proficiency. One of it was initiated in 2004 by Federal Government through Central Bank of Nigeria on bank consolidation and took effect in 2005. The essence of the policy thrust of bank reforms is with the view to make the sector realize its objectives in advancing the economy (CBN, 2006). With this, Nigerian banks will be vibrant and resilient, clothed with efficiency and financial strength to absorb possible shocks, thereby instilling public confidence as well as global relevance (Soludo, 2004). The impact of ICT has greatly enhanced these reforms in the direction of creating competitive advantage among Nigerian manufacturing industries and improving banking services in terms of accuracy, efficiency, quality, greater service delivery and productivity.

The use of ICT has facilitated payments and creates convenient alternatives to cash and cheque for making transactions. These new practices have led to the advancement of a truly global, seamless and Internet enabled 24-hour business of banking. ICT and payment systems are strong integration that has made feasible to outsource quite a number of the banks' role in the payments system and made banks' regulation to be more technologically dependent and better focused rather than focusing on conceptual guidelines (Osabuohien, 2008). The payment systems are made feasible by ICT gadgets such as Automated Teller Machine (ATM), Electronic Fund Transfer (EFT), Clearing House Automated Payments (CHAPs), Electronic Purse (E-PURSE), Automated Cheque Sorter (ACS) and Electronic and Transfer at Point of Sale (EFTPOS), which have made transactions easy and convenient. This phenomenon is capable of bringing about speedy operations and enhanced productivity (Adeoti, 2005; Ovia, 2005).

The technological innovation is currently being experienced in the Nigerian banking sector and is having possible impact on the pattern of transactions especially in their payment systems. Even though, there may be little interruptions sometimes due to network failures, which may make customers unable to carry out transactions at that point in time. This shortcoming is incomparable to the days when banking halls were characterized by long queues mainly as a result of delays in the traditional banking operations (Osabuohien, 2008).

c. ICT and Agriculture for Livelihood

Majority of the population around the world especially in Nigeria are depending on agriculture for their livelihood. Even with this, there are so many questions that are being raised in the mind of people on how they can make a living by harvesting crops used for food and fiber; raising livestock that produces animal products for food or sale; forestry and logging to grow and harvest timber to build shelter. With the use of ICT and agriculture in Nigeria, people would learn and acquire knowledge through sharing information with each other but this is not enough as there are also changes and advancements in agriculture. Farmers should be able to take hold of up-to-date information such as prices, production techniques, services, storage, processing etc. Up-to-date information with the change and advancements in agriculture can be addressed by the effective use of ICT such as Internet, mobile phone, and other digital technologies. Farmers with better access to ICT would have better lives because of the following:

- i. Up-to-date Information on Current Prices: Farmers need to keep abreast of the accurate current prices and the demands of the products which will enable them to competitively negotiate in the agricultural economy which will necessitate their income to be improved.
- ii. Access to agriculture information: There is a need for coordination and streamlining of existing agriculture information sources, both internationally and within the developing countries. The information provided is usually too scientific that farmers cannot comprehend; there is need for such vital information to be relayed to the farmers in a simplified language for their understanding.
- iii. Access to national and international markets: The use of ICT will necessitate increase in the level of access of farmers to national and international markets to establish simplified contact between the sellers and buyers, to publish agricultural exports, and to facilitate online trading of farm produce.
- iv. Increasing production efficiency: With the use of ICT, the flow of information regarding technological tools on how to increase production efficiency would be opened up to farmers which they can also document and share their experiences to others.

d. ICT in Education

ICT is a viable option for economic growth in Nigeria, but according to Bambanota in Ukpe (2013) stressed that investing in national education has not been a top priority for many developing governments for many years. In Nigeria, the percentage of yearly education budget can hardly be enough to improve the basic educational infrastructures talk-less of

adopting new ICT infrastructures (Ukpe, 2013). This is not to say that Nigerian government is paying total deafness to education reforms, it is just that more is needed to be done to greatly improve the educational sector and to compete effectively with the global movement. There are agencies that have been constituted by government in this regard such as Tetfund and NITDA, but more is still to be done in the area of putting up adequate educational policy plan that meets up the global standard, adequate funding to implement the policy; and loyal personnel and stakeholders to execute the policy plan.

In nutshell, application of ICT in education would greatly achieve the followings in any nation if adequate plan is put in place (Ukpe, 2013), especially curbing the peculiar challenges facing the developing countries such as Nigeria (lack of electric power and adequate telecommunication infrastructure):

- i. Education system will be restructured to take a new face lift
- ii. Teaching-learning methods and practices would be diversified
- iii. Engaging all stakeholders of education and adapt rapidly to changes in society and the environment.
- iv. Enhancing education efficiency, effectiveness, and productivity
- v. Capacity building and citizenry empowerment

e. ICT in Politics:

People's belief in a nation that is ruled by democracy should reflect equity, tranquility and the rule of law is to be followed legislatively. This enforces the procedure of selection of leaders of peoples' interest emerging through the process of electoral means. In Nigeria, several electoral parties have been constituted for competitiveness.

In Nigeria, the introduction of ICT into political arm would assist in creating public awareness for wide-coverage campaign via social-network technologies such as facebook, netlog, togo, twitter etc, Through e-registration and e-verification system, the public can submit their bio-information for the process of pre-election and the assurance that the information would be managed and authentically secured via the biometrics data supplied even at the point of e-verification. The introduction of e-voting system would assist in the election process if a robust system is maintained in alleviating the occurrence of anomalies of multiple ballot votes. This would reduce drastically the heap of litigation due to election malpractice.

The technology would also assist in developing legislative tracking systems and building websites for parliament for proper coordination. Access to strategic use of the potential of ICTs would assist in democratisation which includes freedom of speech, the free flow of information and the promotion of human rights. Governments should be adequately equipped with ICTs gadgets and resources for any critical engagement with civil society and public efforts for easy deliberation with government on issues of national importance.

4. Challenges and Suggestions for improvement on the use of ICT

There is low awareness on the use of ICT both in the urban and rural areas. The slow growth of ICT usage is attributed to limited infrastructure including fibre-optic cable and electricity in rural areas; low Internet usage by government, schools, health and agricultural institutions; low ICT literacy; a lack of local content on the internet; and low income levels. There is always good policy document formulation but poor funding for implementation. There is lack of proper control and management of the available infrastructure.

A set of recommendations of possible strategies and actions to support economic and political advancement through the use of ICTs is listed below:

- i. Creating awareness and building understanding of the potential of ICTs for both government and the citizens for economic and political advancement.
- ii. Government should increase the power generation strength and plan intelligent policy and implementation for effective distribution across the country in order to allow ICT infrastructure to be well utilized.
- iii. Strengthening community voice in public debate and decision-making and in maintaining transparency and accountability by government.
- iv. Build infrastructure that would accommodate heterogeneous networking topologies across the nation for global network connectivity for data/information organization, coordination, storage, processing and retrieval for knowledge discovery.

5. Conclusion

ICT has been seen as a catalyst for change in every facet of any knowledge society. Given a place for it and proper funding in Nigeria, ICT would have significant impact on the socio-economic and political power for global competitiveness. Through it, ideas and innovations to promote peace, tranquility and good governance would be kept abreast of a knowledge society such as Nigeria.

References

- Adeoti, J. O. (2005), Information Technology Investment in Nigerian Manufacturing Industry: The Progress So Far, Selected Papers for the 2004 Annual Conference, Ibadan: Nigerian Economic Society, pp.213-244.
- Bakare, A. S. and Lola, G. K. (2011), Estimating the Impacts of Global System for Mobile Telecommunication (GSM) on Income, Employment and Transaction Cost in Nigeria, *Journal of Economics and International Finance*, vol 3(1), pp. 37-45.
- CBN, (2006), Press Release, *The Guardian*, Vol.22 (9902), January 3, pp.11.
- Christopher, A. and Stefan, D. (2009), *Oxford Review of Economic Policy*, Volume 25, Number 2, pp. 173-189.

- Dike, U. I., Adoghe, A. and Ademola, A. (2013), Impact of ICT in Oil and Gas Exploration: A Case Study, *International Journal of Computers & Technology*, Vol. 10, No. 7, pp. 1830-1835.
- Kehbuma, L. (2005), The role of ICT in the Economic Development of Africa: The Case of South Africa, *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, Vol. 2, Issue 4, pp. 144-156.
- NITDA, (2014), NITDA to deepen ICT usage, skill acquisition in Government, *The Guardian Mobile*, October 6.
- Nwabueze, A. U. and Ozioko, R.E. (2011), Information and Communication Technology for Sustainable Development in Nigeria, *Library Philosophy and Practice*, pp. 1-6.
- Osabuohien, E. S. C. (2008), ICT and Nigerian Banks Reforms: Analysis of Anticipated Impacts in Selected Banks, *Global Journal of Business Research*, Vol.2, No.2, pp. 67-76.
- Ovia, J. (2005), Enhancing the Efficiency of the Payment System in Nigeria, *CBN Bullion*, vol. 29 (1), pp.8-18.
- Oye, N. D., Inuwa, I. and Muhammad, S. A. (2013), ICT and Unemployment in Nigeria: Implication on Nigerian GDP, *Environmental Science and Technologies Book Chapter*, pp. 51-59, DOI:10.4018/978-1-4666-2655-3.ch005
- Soludo, C. C. (2004), Consolidating the Nigerian Banking Industry to Meet the Development Challenges of the 21st Century, an address delivered to the Special Meeting of the Bankers' Committee, Abuja.
- Ukpe, E. (2013), ICT in Education: Catalyst for Economic Growth in Nigeria, *International Journal of Education and Research* Vol. 1 No. 10, pp. 79-86.