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## **Funding Business Education Programme in Nigerian Tertiary Institution: The Way Forward**

**Obeka, Chijioke Emenike and  
Okeh-Gaius, Happiness**

**Abstract:** *The paper examined the various ways of sourcing funds to argue government contribution towards implementation of effective business education programme in tertiary institutions in Nigeria. It is an expository research design using secondary data. The paper explored the concept of business education, examined the current method of funding business education programme in public tertiary institutions in Nigeria and the way forward.*

**Key words:** *Business education programme, tertiary institution, Nigeria*

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A Special Issue Conference Proceeding Paper

### **Introduction**

Business education has been signed out as an important discipline that plays a very important part in providing individuals at all age levels with the ability to function effectively in the business world. It involves the acquisition of knowledge, skills, understandings and attitudes to perform in the world of business as a producer and/or consumer of goods and services that business offers. Olaniyan and Ttiloye (2012) observed that business education programme represents a broad and diverse discipline that is included in all types of educational delivery systems – elementary, secondary and post secondary. It includes education for office occupations, business teaching, business administration and economic understanding. It is an integral part of general education which involves the acquisition of practical skills, attitudes, understanding and knowledge of occupations in various sectors of the economy. Otijole in Olaniyan and Ttiloye (2012) noted that business education plays a dual role of preparing the individuals for gainful and useful employment after leaving school as well as educating them to be intelligent consumers of the goods and services of business. Utoware and Edionwe (2012) said that business education is the education for the acquisition and development of skills and competencies, attitudes and attributes which are necessary for efficiency of the economic system. Ulinfun in Aliyu (2001) viewed business education as education for business or

training in business skills which are required for use in business office, clerical occupation and business policy analyses. Osuala (2004) sees business education as a programme of instruction which consists of two parts: Office education – a vocational education programme for office career through initial refresher and upgrading education leading to employability and advancement in the office occupations; and General Education, a programme to provide students with information and competencies, which are needed by all in managing personal business affairs and in using the services of the business world.

Mulan in Utoware and Edionwe (2012) opined that the success of any business education programme depends largely on the objectives of the programme, availability of equipment, adequate textbooks, a well-defined curriculum and availability of effective and efficient teaching staff, as well as other educational resources.

According to Ademola (2000), economic hard times has forced many Nigerian to recognize and accept the potentialities of business education in insulating them from the discomfort of unemployment and employability. A good system of business education programme provides a social manpower foundation for technological and industrial growth. Thus, the attention which business education has received since the implementation of the National policy on Education is partly traceable to the vicissitudes of the economic down turn which accentuated in the early 1980s.

Ademola (2002) noted that in the past, business education at all levels in public schools was being financed by the government through regular allocation of funds, students through tuition and development levies. Despite these major sources of funds to business education system, there exists acute shortage of funds to implement fully the business education programmes. The effect of this lack of adequate funds can be observed in shortage of infrastructure in many schools, ill equipped business education laboratories and irregular payment of teachers' salaries.

Since it has become clear that the government alone can no longer effectively fund business education there is need to assist the government identify sources of funds for the implementation of the business education programme, especially at the tertiary level of education in Nigeria. This paper is, therefore, a modest attempt to identify the various ways of sourcing of funds to argument government contribution for business education programme in tertiary institutions in Nigeria.

### **Design of the study**

This is purely an expository research design using secondary data.

Ibigbami (2000) observed that business education is categorized into basic business courses namely, Economics, Commerce, Accounts, Secretarial clusters and Distributive Education. All these courses are competency based and career oriented, hence, the multi-faceted nature of business education is a problem to the teacher and the nation. Today, education is very expensive and business education is even more expensive. The present-day business education requires the use of expensive equipment and machines as well as specialized and skilled manpower. It is, therefore, capital intensive.

Yabani in Ibigbami (2000) noted that the National Policy on Education (1981:20) acknowledged five types of technical institutions outside the University system, but Yabani however, indicated three broad classifications. They are:

1. Vocational Schools at post primary level for production of artisans leading to Trade Test Certificate awarded by the Ministry of Labour.



2. Technical Colleges at Post Junior Secondary school level for production of Craftsmen and Master Craftsmen leading to the award of the Federal Craft Certificate and the WEAC Technical commercial certificates which has been replaced by (NTC) and Advanced National Technical Certificate (ANTC) for courses based on NBTE curricula.
3. The Polytechnic/Colleges of Technology and similar post secondary institutions like Colleges of Agriculture, which offer courses leading to the National Diploma (OND) and Higher national Diploma (HND) and produce technicians and Higher Technicians/technologists.

These were contained in the National Board for Technical education's report submitted to the National council on education in 1987. This submission leaves out a fourth and indeed, an important category recognized by the national Policy on education itself. This is the Technical education of which business education is part at post secondary level, yet outside the University system namely, Colleges of Education (Technical).

#### **Funding Business Education in Tertiary Institutions in Nigeria**

Ibigbami (2000) said that the biggest problem facing business education today is inadequate funding. Most times, the subvention granted to the institutions running business education courses are not enough and would not come in good time to meet the basic recurrent expenditure, which is the payment of salaries and allowances when they fall due. The other recurrent expenditure known as other charges for the proper day to day running of business education programmes in these institutions are not forth coming. Hence, there are dilapidated structures and abandoned equipment which were conceived for providing business education. The running cost of the items are too prohibitive for the institutions lean financial resources.

Related to the inadequate subvention is the late release of subvention. This, coupled with the low level of workshop fees paid by students, compared with the corresponding expenses to be covered is flimsily inadequate. There are funding gaps between the budgets submitted by business education institutions and the amount released to them by the government. In fact government subventions to these institutions have not kept pace with student's enrolment growth.

Business education programmes in Nigeria's tertiary institutions have not been adequately funded despite the fact that science, technology and vocational education remain the prerequisites for national development. The authenticity and fulfillment of these statements lie on adequate funding of this sector of education. Adeyemi (2005) highlighted this point by stating that the strategy for the technological advancement of any nation must give top priority to the provision of adequate funds, high caliber staff and high quality equipment to the institutions responsible for training and research in technology. Unfortunately, in Nigeria, these institutions seem not to be given the attention and consideration they deserve. The departments offering business education programmes in the institutions are ill-equipped, ill financed and their staff and students are not provided with adequate encouragement and incentives. For these reasons, these programmes have been in poor state. There is inadequate quantity and quality of instructional equipment, insufficient number of quality academic staff and classrooms. There is also lack of maintenance culture, inadequate provision of the latest technologies in business education,

inadequate supply of consumables, machines and equipment spare parts, inadequate training and retraining for already serving staff. This is also in line with Ezeugwu (2009) who pointed out that insufficient fund for business education programmes has hampered the progress of all levels of education. Business education remains the prerequisites for national development.

Adetunji (1994) lamented that due to the difference between the time agreed upon for fund release and the actual time of availability from government, heads of institutions undertake a lot of shoddy jobs and projects. Apart from this fact, the quality of teaching and research has dropped and qualified teachers and professionals lined-away for other sectors of the economy. Adetunji was of the view that alternative sources of fund should be found to supplement government resources. Adetunji noted that as far as Nigeria is concerned, no actual serious attempts has been made to estimate the costs involved in programmes of business education. All efforts geared towards this end has been on paper. Business education has continued to be under financed, when considered in relation to the tasks to be undertaken, and when compared to other sectors of education, and this is due to:

Firstly, lack of national policy and clarity over purpose and significance of business education on the part of the government.

Secondly, the civil service, especially Ministries of Education, and labour to mention but a few, are controlled by people who themselves were trained at a time when business education was not conceived as being important. To most of them, even parliamentarians, the other sectors of education are the normal and proper ones; business education is not more than a peripheral frill, and hence, funds meant for her are usually brutalized by them. Whenever there is any economic or finance belt-tightening, business education votes are the first to be cut.

Thirdly, business education is looked upon as a semi-professional job, one better left for the willing, unpaid and other volunteers.

Fourthly, there is the conviction that learners should pay for their education and that only by doing so will the facilities provided be appreciated.

All these constitute problems to policy issues n funding of business education, especially from government in the context of prevailing social, economic and political realities. Worse still, the formulae used for allocation is biased.

Ibigbami (2000) said that the principle underlying the funding of Business education is that there is a minimum level of funding below which the programme cannot be effective and should not be attempted. This is because of the capital intensive and uncompromising nature of the programmes due to the following reasons:

- 1) High demand for equipment and specialized manpower unlike the other educational programmes;
- 2) Provision of funds for continuous research and development.
- 3) Acquisition of equipment, based on changing technology.
- 4) Construction and maintenance of infrastructures
- 5) Funding of students practical experience schemes

- 6) Payment of remunerations for the varying categories of business personnel.
- 7) Staff development programmes and activities.
- 8) The repairs, rehabilitation and refurbishing of equipment and tools
- 9) Training and retraining of students and employees on improved facilities and equipment.
- 10) Ideal administrative structures suitable for business education institutions and programmes management.
- 11) Adequately supplementing the resources of business education trainees as a means of motivating them.
- 12) Follow-up, supervision, inspection and studies on employees and practitioners in Business Education.
- 13) The trainer/teacher/lecturer of a group of skill should be a master of relevant occupation.

Titiloye (2008) said that the greatest problem of business education is inadequate funding. Titiloye noted that enough funds is needed to purchase equipment to constantly service the machines, to replace outdated accessories and to purchase necessary materials that can aid in teaching and learning process. This financial involvement scares a lot of institutions from establishing business education department in their institutions. Alakpa (2012) lamented that in most of the tertiary institutions in Nigeria, business education is poorly funded and this has affected the quality of business education graduates turned out yearly. Okeke and Eze in (2012) regretted that poor funding has created a serious challenge to the successful implementation of business mandate in Nigeria. Okeke and Eze noted that business education is capital intensive, and therefore needs funds to procure computer system, typewriters, furniture and sizeable laboratories to make the programme become effective and efficient and as it is found in most developed nations.

Agbo (2012), identified the following strategies currently used in funding of business education programmes in tertiary institutions in Enugu State of Nigeria (1) increases in school fees, (2) periodic fund raising by the management, (3) renting of facilities, (4) establishment of bookshops; (5) leasing of typing pools; (6) student union dues; (7) donations from clubs and organizations; (8) donations from Alumni association; (9) launching of departmental journals; (10) proceeds from organizing social activities; (11) establishing photocopying centers; (12) sale of stationeries; (13) government allocations; (14) government grants; (15) development levies by students; (16) PTA levies; (17) interest on banked money.

### **The Way Forward**

Agbo (2012), however, opined that the current strategies in use in the funding of business education programme in tertiary institutions in Enugu State Nigeria, are not adequate enough to solve their problems, and consequently, Agbo suggested the following innovative strategies for effective funding of business education programme in tertiary institutions in Enugu State: (1) reserving a certain percentage of property tax collected by the state for the

funding of business education; (2) reserving a certain percentage company tax to business education; (3) annual contributions by the users of business education products; (4) establishment of endowment fund by the community where the programme is situated; (5) establishment of endowment fund by philatrophic organization; (6) establishment and operating of business centres by departments; (7) establishment and operating of cyber café by the departments; (8) organizing short term course for secretarial staff; (9) organizing workshop and seminar for practicing secretarial staff; (10) commercializing the typing of students projects; (11) special allocation of funds to the department of business education; (12) offering secretarial services at cost to the public; (13) organizing in-service training at cost especially on ICT; (14) special technological education tax on operators of business centres and cyber cafes within the local government area where the programme is situated; (15) special technology education levy by business education students; (16) establishment of a commercialized relaxation centre such as cinema and video clubs by the business education department; (17) donations from Alumni Association; (18) donations from clubs and organizations, (19) periodic funds raising by the management; (20) interest on banked money; (21) proceeds from organizing social activities; (22) launching of departmental journals; (23) establishment of bookshop.

Ademola (2000) suggested the following strategies for the funding of business education programmes in tertiary institutions in Nigeria.

#### **Registered companies/parents**

1. By giving loans and scholarships to outstanding students.
2. By donating buildings and supply of equipment to schools for business education.
3. Admitting students for work experience freely.
4. Donations to the Business Education Endowment Fund

#### **Federal, State and Local Government**

1. Motivating and encouraging community to assist in embracing the sponsor of projects needed by business education schools.
2. Organizing drama and exhibitions and using the money realized for promoting business education programmes.
3. Giving special grant up to 20%, 10% and 5% respectively of income tax in addition to budgetary allocation to business education
4. Tolls collected from roads, allocating about 10% of it to business education.

#### **Clubs and Societies/Religious Bodies**

1. By giving loans and scholarships to deserving students
2. By providing prizes and trophies to be competed for.

3. Providing equipment for Business Education programmes.

The ingredients and techniques found out to be useful for stimulating the supply of funds according to Ademola (2000) are:

1. Business Education could organized seminars, workshops and conferences to make the populace realize the importance of Business Education and the need for the community and general public to support it.
2. Through exhibition by the business community the general public could be convinced to finance business education.
3. A national Board for Financing Business Education should be set up comprising representatives of different bodies. Company representatives, religious bodies, parents, club and societies etc.
4. Appeals could be made to individuals, organizations, clubs and societies etc. to come forward and support business education programme.

### **Conclusion**

For business education to be effective, it must be adequately supported financially by all concerned. If Nigerians could pull their resources together to finance business education as identified by this paper, then adequate foundation must have been provided for the most desired sustainable development of Nigeria.

### **Recommendations**

A number of sources have been identified for generating funds to complement government subvention; but because of the intermittent nature of these sources, searches for most reliable sources of funding business education should be explored. The following are, therefore, recommended:

- 1) Legislation on education should have a section relating specifically to business education, indicating government intention to allot certain percentage for the running of business education programme in Nigeria. It should be recalled that the United Nations Educational, Scientific and Cultural Organization (UNESCO) advocated 26% budgetary allocation to education funding by developing nations. Therefore, Federal, State and Local governments in Nigeria should agree on a certain percentage to be devoted to business education in Nigeria because everybody needs the products of business education.
- 2) Education Trust Fund ETF should set apart a certain percentage of its funds specifically for the running of business education in tertiary institutions in Nigeria.
- 3) Registered companies in states where business education programmes are run in tertiary institutions should be compelled to give certain percentage of their profits for the funding of business education.

- 4) Communities and individuals should give scholarships to outstanding students. They should also erect buildings and buy equipment for business education department in consultation with the relevant authorities of the institutions.
- 5) States and National Assemblies should determine the school fees and other levies which students should pay, if necessary, and such funds should be properly managed and accounted for.

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## Issues and Challenges of Privatization of Nigeria's Power Sector

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**Abstract:** The study examines issues and challenges of privatization of Nigeria's power with special interest in issues and challenges in Nigeria's power sector, measures taken by government in tackling the issues and challenges and benefits of privatized power sector in Nigeria. In doing this, secondary data sourced from books, journals and publications were used. Questionnaire comprising 3 research questions was administered to 50 professionals in financial engineering and technology. The questionnaire was constructed using Likert Five-Point Scale Response and analyzed using weighted mean. This methodology revealed that inadequacy of gas for firing turbines, community issues over bidding and ownership, cost recovery challenge due to over-priced power plants, transmission issues, the Multi Year Tariffs Orders, end user tariffs, settlement of workforce, etc. are the issues and challenges of privatization of Nigeria's power sector. Implementation of Power Reform Act, protection of consumers' power right, avoidance of skyrocketed electricity bill among others were recommended for tackling the identified issues and challenges.

**Key words:** DISCOs, GENCOs, National Development, Power Sector, Privatization

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### INTRODUCTION

Electric power is the rate per unit time of energy consumption in an electrical circuit. Its supply and production are very vital to sustainable development of any nation. Nigeria with a population of about 200 million as stated by Worldometers (2019) (which relies on United Nation's estimates) needs sustainable power supply to properly utilize her potentials in industrialization, agriculture, health, education, human capital development, etc. Abdullahi (2016) stated that with electrical energy, the people are empowered to work

from the domestic level and the cottage industries, through the small-scale and medium industries to employment in the large-scale manufacturing complexes. He also stated that depriving people of electric power is tantamount to castration. Therefore, inadequate supply of electricity will make production and distribution of goods and services virtually impossible. While erratic supplies of electricity disrupt production, voltage fluctuations negatively affect the durability of machines. Enhanced electricity generation and distribution can thus, raise the efficiency and effectiveness of Nigeria's economy for sustainable national development. The electric power industry across the world is being deregulated at wholesale price level. The policy and strategic change, in whatever form it finally takes, will make great impacts on electricity supply in Nigeria.

However, it is sad to note that Nigeria as reported by Humwapwa (2019) produces just 4,000MW while South Africa (an African country like Nigeria) with a population of about 60 million, produces 51,309MW. Humwapwa (2019) also reported that over the years, the Federal Government of Nigeria tried various means, strategies and reforms to grow the power sector and to make it work, but all attempts have been an exercise in futility. While the already terrible power supply situation in the country is hitting hard on Nigerians and the economy, the Distribution Companies (DISCOs) have at the same time been defrauding electric power customers with outrageous electric bills. The charge is more than the officially approved rate. These companies have steadily been adding more insult to the injury of suffering Nigerians through the issuance of exorbitant monthly electricity bills that are over and above what is actually consumed. DISCOs inherited this fraudulent practice from the defunct Power Holding Company of Nigeria (PHCN). Unfortunately, the practice has been going on for years and has become endemic but need to be stopped.

Privatization is contract with nongovernmental sector that engages them in the production and provision of the good and services that were hitherto exclusively provided by the government. It has a wide range of coverage in models and methods depending on practitioners. Thus, has no particular meaning. Developing countries adopt privatization as a result of crises in financial management, infrastructural decay and inability of the government to manage public enterprises. Others reasons are based on need for delivery of quality services to their growing populace through outsourcing, divestiture, public private partnership, franchising, etc.

It is a common knowledge that regular power supply is very important for rapid economic growth. Attempts by successive Nigerian governments at industrialization and rapid economic growth have been hampered by incessant power failure. Presently, the power sector in Nigeria is privatized with no meaningful improvement. The privatization of the power sector is aimed at solving problem in the sector which among others include: - limited access to power, inadequate generation and usage of power capacity, conflicting roles between government and holding companies. It is worth stating here that privatizing the arms of the power sector (e.g. generation, transmission, distribution, etc.) is now becoming a global practice.

At the moment, Nigeria uses four sources of energy namely natural gas, oil, hydro and coal. It is a common knowledge to experts in Nigeria's power sector that energy used in the sector is heavily dependent on petroleum. This is worrisome as it has increased greenhouse gas emissions and slowed down the development of alternative forms of energy. Ahiuma-Young, Obasi & Ejoh (2017) reported that the power situation in the



country, especially in 2016, was precarious. They also stated that the feeling among Nigerians is that the defunct PHCN is better than the DISCOs, GENCOs; insisting that many concerned Nigerians are calling for a review of the privatization of the power sector so as to return it to public control. Unfortunately, the feeling has not stopped today. The situation is really worrisome when expectations were high that privatization would be the much awaited proverbial messiah to teething problem of inadequate power supply in Nigeria.

The poor performance of Nigeria's power sector over the years is seen as evidence of ineffectiveness of successive governments. However, the situation has not improved much since the privatization of much of the power sector in recent years, even with continued government subsidies for some users. Now, faced by economic misfortune occasioned by corruption, insecurity, maladministration and dwindling income due mainly to the collapse of global oil prices, the present administration in Nigeria has the challenge of convincing unsatisfied electricity consumers that they must accept substantial increases in energy tariffs if the country is to achieve constant, stable and nationwide electricity supply. These myriads of problems have bedevilled Nigeria for long. The endemic power crises came as a result of the inability of the existing plants to meet the ever increasing demand. The supply-demand gulf exists because of reasons namely obsolete and dilapidated plants with low installed capacity, poor maintenance culture, poor managerial efficiency.

No doubt, electric power supply is the heartbeat of Nigeria's economy. It is very vital to sustainable development of the country. It is an important input to production. As such, any issue affecting it, is treated with utmost importance because the Nigerian public with a population of over 190million will benefit a lot from any research work carried out on privatization of the power sector. The country needs sustainable power supply to properly utilize her potentials in industrialization, agriculture, health, education, human capital development, etc. She has to join the electric power industry across the world that is being deregulated or privatized at the wholesale price level. This deregulation or privatization policy change, in whatever form it takes, has far-reaching impacts on electricity production, transmission, distribution and consumption by private and public utilities. It is against this backdrop that this paper examined the issues and challenges in the privatized power sector in Nigeria in an attempt at finding lasting solution to an endemic problem. Thus, the study seeks to:

1. Ascertain the issues and challenges in Nigeria's power sector?
2. Identify the measures taken by government in tackling the issues and challenges?
3. Identify the benefits of privatized power sector in Nigeria?

## **LITERATURE REVIEW**

Electric power is the rate at which electric circuit transfers electrical energy to units where the power is consumed. The electrical energy is converted to another form, such as motion, heat, or an electromagnetic field. The common symbol for power is block letter P. The S.I. Unit of measurement for electric power is watts.

$$1\text{kW} = 1000\text{W}.$$

In utility consumption, the kilowatt (kW) is often specified instead. One watt is the power resulting from an energy dissipation, conversion, or storage process equivalent to one joule per second. The electric power P is equal to the energy consumption E divided by the consumption time t:

$P = \frac{E}{t}$ , P is the electric power in watt (W), E is the energy consumption in joule (J) and t is the time in seconds (s).

On the other hand, privatization is the contract with the nongovernmental sector engaging them in the production and provision of the good and services that were hitherto exclusively provided by the government. When a sector is privatized, government owned enterprises are traded-off to profit minded investors who operate freely in a capitalist economy. Rouse (2019) stated that privatization may entail either outright sale of government-held assets or removal of trade restrictions that have been preventing investors from competing with government. She also stated that it is an ongoing trend in many parts of the developed and developing world. King (2014) stated that moving a business from government ownership to private ownership improves the profit incentive as the new owners will focus on return on investment. Rouse (2019) further stated proponents of privatization insist that the competition which privatization brings into the economy encourages efficiency more than public controlled enterprise while critics of privatization maintain that social amenity services such as healthcare, education, law enforcement and the like should not be privatized so as to ensure equitable access to the populace.

#### **The Challenges of Privatization of Power Sector in Nigeria**

The challenges of privatization of power sector in Nigeria include among others: the challenge of commencement, finance, inadequate gas supply determination of tariff, fraudulent practices, settling employees' packages.

##### ***The Challenge of Commencement***

It is worrisome to note that organizations that in the generation, transmission and distribution of electricity are still battling with commencement challenges till date. The Transmission Company of Nigeria is also facing initial challenge of fund as it requires about \$4.4billion to increase power transfer capacity, make the network more stable and reliable, and to increase transmission capacity to 16,843 MW by end of 2018 (Edukugbo, 2014.). Obasi & Anyasina (2014) reported that recent poll conducted by NOI Polls showed that electricity supply in Nigeria worsened in the last quarter (Q4) of 2013. According to them, the report stated that although power supply to households worsened in Q4, nevertheless, majority of Nigerians (70 percent) were hopeful about the ongoing reform in the power sector. The report indicated that an average of 46 percent of Nigerians received continuous power supply at not more than 4 hours daily, while 17 percent claimed not receiving any power supply in their various homes. The Poll however, noted that in Q4, there was an improvement in the nation's power sector as the privatisation process was taken to the next level. Unfortunately, these challenges are still there as reported by Humwapwa (2019).

##### ***Finance***

Kalu and Mbanasor (2004) defined finance as the science of money management. The main focus of finance is investments; and investment is interested in the behaviour of assets and liabilities within a specified period. It does not neglect uncertainty and risk. The power sector is a highly capital intensive industry that requires huge amount of money. It is a common knowledge that most of the investors that acquired the unbundled government owned Power Holding Company of Nigeria (PHCN) borrowed money from banks and

having acquired these loans from these banks, continuous financing of the projects will become a huge task. Oketola (2013) reported that Nigerian banks provided 70 per cent of the funds in loans and equity of the N404bn paid for the power assets. He stated that the acquired loans and federal government intervention funds disbursed through Money Deposit Banks will not be sufficient to fast track the rapid turn-around expected in the sector. Further challenge he noted, is that the estimated \$4.28bn required capital expenditure and rehabilitation expenditure is hoped to be provided by indigenous banks. The expected spending by disco is to cover the following areas: provision of power transformers, metering, health, safety and environmental practices, reduction in the number of customer interruptions due to network faults, new customer connections and network expansion, improving customer services and complaints handling procedures.

As result of water, gas and transmission line constraints, the Nigerian Electricity Supply Industry as reported by Humwapwa (2019), incurred an aggregated loss of about N90bn in five years. This would no doubt hampered the distribution of generated energy by DISCOS no matter the amount of money released to them.

#### ***Inadequate Gas supply***

Okere (2017) reported that the Federal Government said the Nigerian electricity sector recorded a shortfall of 3,000 Megawatts (MW) due to inadequate gas supply to power plants. She also reported that the country's power generation stagnates at 3,729 MW. The negative effects of saboteurs, militants and vandals in gas production affect the availability of gas. This is seriously affecting the power sector reform as it is anchored on the use of gas to power systems in order to meet the needs of the country.

#### ***Determination of Tariffs***

Tariff as a tax imposed on imported goods and services is one of several tools available to shape trade policy. It is a common knowledge that most of the machines used in Nigeria's power sector are imported; thus are subjected to tariffs which increase production cost. Joseph (2014) stated that electricity prices in Nigeria are currently below production costs and that the industry hardly generate enough revenue for its operating costs let alone capital expenditure which are imported. This is another huge challenge of privatization of Nigeria's power sector as there will no fund bailout from government.

#### ***Fraud***

Nigerian Electricity Regulatory Commission, NERC (2005) stated among others that all customers have a right to transparent electricity billing and should be notified in writing ahead of disconnection. More so, the unmetered ones should be billed with approved estimated billing methodology and in the event of overbilling should be refunded. However, as sweet as the above may sound, Asu (2017) reported that many electricity consumers were groaning over estimated billing. Oke (2018) reported that huge metering gap in the country is a big challenge. He stated that metering alone reduces collection losses by 30% and minimises the alienation of consumers who, often, underpay or do not pay their electricity bills because of disputed or crazy bills. He concluded that there is no doubt about the current method of billing not being transparent.

#### ***Settling of Employees' Welfare Packages***

International Labour Organization, ILO (n.d.) stated that welfare of employees includes facilities of organizations that their workforce perform their assigned duties in healthy and congenial environment and to provide them with amenities conducive to healthy living and morale booster. It was reported in Echewofun (2016) that aggrieved workers of the

defunct PHCN under the National Union of Electricity Employees (NUEE) have not been paid their outstanding severance packages. A situation that led to the intervention of Nigeria's Minister of Labour who struck a deal with aggrieved workers to reconstitute a committee to verify and pay outstanding severance packages. The report had that the immediate reconstitution of a technical and implementation committee was to ensure the final verification and payment of severance packages to unpaid PHCN staff, payment of the 16 months arrears owed the ex-staff and inclusion of staff in the 10% equity shares of privatized companies.

### **Benefits of Privatization of Power Sector in Nigeria**

Despite the various issues and challenges discussed above, there are still benefits of the privatization of the Nigerian power sector. There will be improved and regular electricity flow in most parts of Nigeria. Oni (2015) stated that opportunities exist for the construction of alternative independent power projects, such as coal fired power plants and renewables. He also stated that Nigerian Bulk Electricity Trading Plc. (NBET) is ready to buy power from the GENCOs and sell in competitive markets. Nwogu, Makinde, Okere, Utebor, Onuba, & Nnodim (2017) reported that to some extent, power sector has improved in Nigeria but the full benefits are expected. Ojobo (2005) stated that privatization will eliminate fraud and remove unproductive use of national resources. Any investor considering Nigeria ought to be interested in the progress of the country's power sector privatization. International investors will benefit from a closer inspection of, and familiarity with, the opportunities presented by this exciting development in Africa's biggest economy (though in recession). Audu, Paul & Ameh (2017) stated that privatization of the power sector extricates government interference and reduces its excesses from the management of power in Nigeria. This enhances efficiency.

### **RESEARCH METHODOLOGY**

A survey research was adopted for the study. Questionnaire comprising 3 research questions with 23 multiple choice items was administered to 50 professionals in the fields of financial engineering and technology namely: quantity surveying, construction economics, construction project management, accounting, construction finance, cost engineering, etc. The questionnaire was constructed using Likert Five-Point Scale Response Alternative and analysed using weighted mean. The formula for calculating the Weighted Mean is shown below:

$$\bar{X} = \sum FX / N$$

Where:  $\bar{X}$  = Weighted Mean,  $\sum$  = Summation, F = Frequency, X = Nominal Value of Options and N = Number of Respondents. Nominal values were assigned to six scaling items as follows:

Strongly Agree (SA) = 5, Agree (A) = 4, Undecided (UD) = 3, Disagree (D) = 2, Strongly Disagree (SD) = 1 and Void (unfilled options) = 0. The Mean of each cluster was also calculated using the formula below:

$$\bar{X} = \sum X / N$$

Where:  $\bar{X}$  = Cluster Mean,  $\Sigma$  = Summation, X = Nominal Value of Mean of Each Option in a Cluster and N = Number of Cluster. The decision rule of acceptability was 3.5 points and above while points below 3.5 were rejected. The questionnaire was administered by the researchers who also collected them back on completion. This ensured 100% return of questionnaires administered.

## RESULTS

The data collected for this study were arranged in tables and models which were analyzed using frequency count and weighted mean.

### Data Presentation

#### Research Question One

What are the issues and challenges in Nigeria's power sector?

**Table 1** – The mean of respondents' views on the issues and challenges in Nigeria's power sector.

S/N	Description	SA	A	UD	D	SD	Mean	Remarks
1.	The Challenge of Commencement	25	25	0	0	0	4.50	Accept
2.	Finance	8	17	6	14	3	3.27	Reject
3.	Inadequate gas supply	14	22	6	8	0	3.84	Accept
4.	Determination of tariffs	6	17	17	6	3	3.35	Reject
5.	Fraudulent practices	17	28	3	0	0	4.24	Accept
6.	Reconciliation of balance sheet	14	22	8	6	0	3.88	Accept
7.	Settling of employees' welfare packages	14	17	14	3	2	3.76	Accept
	<b>Grand Mean</b>						<b>3.83</b>	<b>Accept</b>

#### Research Question Two

What are the measures taken by government in tackling the issues and challenges?

**Table 2** – The mean of respondents' views on the measures taken by government in tackling the issues and challenges

S/N	Description	SA	A	UD	D	SD	Mean	Remarks
8.	Encouraging private sector participation	0	8	25	14	3	2.76	Reject
9.	Diversification of the energy generation sources	8	17	6	14	3	3.27	Reject
10.	Promoting energy efficiency for sustainable development.	6	11	19	6	6	3.10	Reject
11.	Construction of new power generation facilities, transmission lines	11	14	14	6	3	3.50	Accept

12.	Distribution centres to boost the power supply	6	17	11	11	0	3.40	Reject
13.	Initiation the process of selling off the existing facilities to private investors	11	68	18	0	5	4.02	Accept
14.	Embarked on programmes and strategies aimed at boosting energy generation from renewable sources	14	17	14	3	2	3.76	Accept
15.	Focus on the need for energy efficiency on both demand and supply side to reduce greenhouse gas emission	8	14	22	6	0	3.48	Reject
16.	Ensuring viability of energy systems	5	17	17	6	3	3.24	Reject
	<b>Grand Mean</b>						<b>3.39</b>	<b>Reject</b>

### Research Question Three

What are the benefits of privatized power sector in Nigeria?

**Table 3** – The mean of respondents' views on the benefits of privatized power sector in Nigeria

S/N	Description	SA	A	UD	D	SD	Mean	Remarks
17.	Provision of opportunities for international and local investment.	24	26	0	0	0	4.50	Accept
18.	Improved and regular electricity flow in most part of Nigeria.	8	17	6	14	3	3.27	Reject
19.	Frustration of corrupt Nigerians who want to hold Nigeria to ransom	6	11	19	4	6	3.10	Reject
20.	Creation of new business/jobs in the power sector	14	22	8	6	0	3.88	Accept
21.	Elimination of fictitious electricity bills	6	17	11	11	0	3.40	Reject
22.	Elimination of illegal sale of transformer to power consumers	125	44	18	6	5	3.96	Accept
23.	Encouragement of competition	14	17	14	3	2	3.76	Accept
	<b>Grand Mean</b>						<b>3.70</b>	<b>Accept</b>

### Findings/Discussions

**Table 1** – Items 1, 3, 5, 6 and 7 with weighted mean scores of 4.50, 3.84, 4.24, 3.88, and 3.76 respectively were accepted by the respondents as being issues and challenges in Nigeria's power sector. On the other hand, respondents rejected items 2 and 4 as being issues and challenges in Nigeria's power sector. These items scored weighted mean of 3.27 and 3.35 respectively.

With a grand mean of 3.83, Table 1 revealed that there are issues and challenges in Nigeria's power sector. This finding corroborates the report of Obasi & Anyasina (2014) where they stated that recent poll by NOI Polls Limited Electricity supply in Nigeria



worsened in the last quarter (Q4) of 2013. It is in tandem with (Edukugbo, 2014) who stated that The Transmission Company of Nigeria is also facing initial challenge of fund as it requires about \$4.4billion to increase power transfer capacity, make the network more stable and reliable, and improve efficiency of electric power transfer by reducing transmission technical losses and enable TCN to increase transmission capacity to 16843 MW by end of 2018.

**Table 2** – Items 1, 2, 3, 5, 8 and 9 with weighted mean scores of 2.76, 3.27, 3.10, 3.40, 3.48 and 3.24 respectively were rejected by the respondents as being the measures taken by government in tackling the issues and challenges. On the other hand, respondents accepted items 4, 6 and 7 as being the measures taken by government in tackling the issues and challenges in Nigeria's power sector. These items scored weighted mean of 3.50, 4.02 and 3.76 respectively.

The results in Tables 2 clearly show the measures taken by government in tackling the issues and challenges in Nigeria's power sector are not enough. The findings as shown in Table 2 do agree with Oketola (2013) who reported that Federal government intervention funds disbursed through Money Deposit Banks will not be sufficient to fast track the rapid turn- around expected in the power sector.

**Table 3** – Items 2, 3 and 5 with weighted mean scores of 3.27, 3.10 and 3.40 respectively were rejected by the respondents as being benefits of privatized power sector in Nigeria. On the other hand, respondents accepted items 1, 4, 6 and 7 as being benefits of privatized power sector in Nigeria. These items scored weighted mean of 4.5, 3.88, 3.96 and 3.76 respectively.

With a grand mean of 3.70, it is evidently clear that there are benefits in privatized power sector in Nigeria as shown in Table 3. This corroborates the position of Oni (2013) who stated that opportunities exist for the construction of alternative independent power projects, such as coal fired power plants and renewables if the power sector is privatized. The government of Nigeria, he added, entered into a memorandum of understanding with a Chinese energy firm to build a US\$3.7 billion coal power project which is expected to add 1200 MW of electricity to the national grid. This will also create more employment and developmental opportunities.

## **CONCLUSION**

The power sector is indeed a very important sector; critical to the rapid transformation of any economy and the power sector reform discussed in this study is in the right direction. No doubt, the attempts by successive Nigerian governments culminating in the various power sector reform programmes which are also integral components of President Muhammadu Buhari are bold steps towards the rapid development of the economy. However, the challenges and issues examined here will significantly affect the aims and objectives of the reform. Thus, it is needful for the government to boldly tackle these issues and challenges. The challenges mentioned here are by no means exhaustive. If the Government can intervene and resolve them, it will create a peaceful environment for the new investors to operate. The intention of the reform of the Nigerian power sector is the provision of cheap, neat, safe, and environmentally friendly electricity for use in socio-economic activities such as construction, agriculture, communications, household chores, education, entertainment, healthcare services, security; commerce, industrialization, water Supply, etc. This will result to minimized waste, improved productive capacity, enhanced

health and better revenue to individuals and the economy coming from exports and taxation. Access to quality electricity service is therefore a significant factor in poverty alleviation.

## **RECOMMENDATIONS**

Based on the findings, the following recommendations are made as a way forward:

1. The major recommendation to the problem of the power sector reforms in Nigeria is the implementation of the reform Act; the Act is not being fully and strictly implemented. It is therefore opined that there should be machinery specifically put in place for the strict enforcement of the Act and this machinery would ensure the proper transition from the holding company to the successor companies under a very fair and transparent process.
2. Laws should also be established and the consequences of such laws should mettle with any defaulter; and citizens should be enlightened about such laws. Educating them on their rights on such laws and its importance should be part of the enlightenment programme.
3. Electricity bills should not be skyrocketed when power is not being received by individuals or corporate organizations paying for them.
4. Relevant government Ministries, Departments and Agencies (MDAs) should check the excesses of the privatization process to ensure conformity with the Act and international minimum acceptable standard.

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## Financial System and Nigeria's Economic Development: Issues, Challenges and Prospects

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**Abstract:** This research paper investigated the relationship between the financial system and the performance of the Nigerian economy for the period 1981 to 2017. The research which adopted the ex post facto research design collected data from secondary sources including the Central Bank of Nigeria statistical bulletin and Nigeria Bureau of Statistics Abstract of Statistics. The collected data was analyzed using the OLS multiple Regression model, Auto-Regressive Distributed Lag Co-integration and Bounds test and Augmented Dickey-Fuller unit root tests. The results of the analyses revealed that on the short run, there is a positive and non-significant relationship between the economy and aggregate bank assets and aggregate domestic savings but a negative non-significant relationship with stock market capitalization and federal government bonds. The results further show that there is no statistically significant long-run relationship between the economy and either of commercial banks assets, aggregate domestic savings, stock market capitalization or federal government bonds. Based on the results, it is concluded that the financial system is not contributing meaningfully to economic development in Nigeria. Thus policies to help reposition the financial system are required. This should include deepening the financial system and enhancing its ability to mobilize the necessary resources to drive economic growth and development.

**Key words:** financial system, economic development, commercial banks assets, aggregate domestic savings, stock market capitalization

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### INTRODUCTION

The state of the economy in any country is largely dependent on the state of the financial system. A developed and properly functioning financial system will be able to facilitate economic activities to drive economic development. However, a dysfunctional financial system may well aid deterioration of the economy. As noted by Stiglitz (1998), well-functioning financial systems do a very good job of selecting the most productive recipients for these resources and ensuring that they are using them in high return activities. In

contrast, poorly functioning financial systems often allocate capital in low-productivity investments.

The financial system includes all financial intermediaries that operate in the financial sector in the economy. This includes financial instruments and assets, financial markets and intermediaries. The financial system provides an enabling environment for economic growth and development, productive activity, financial intermediation, capital formation and management of the payments system. With intermediation, savers lend to intermediaries, who in turn lend firms and other fund using units. The saver holds claim against the intermediaries, in form of deposits rather than against the firm. These institutions provide a useful service by reducing the cost to individuals, of negotiating transactions, providing information, achieving diversification and attaining liquidity (CBN, 2017).

It is anchored on the belief that economic agents are categorized into surplus and deficit spending units. The surplus spending units are individuals, groups or organizations operating within the economy that have excess funds above their immediate needs. They constitute suppliers of surplus funds to the financial system. The deficit spending units are those that have a shortage of funds and thus require borrowing to fund their operations. They are the users of the excess funds supplied by the surplus spending units in the financial system. Levine, (2005) asserted that there is an ever-expanding body of research evidence suggesting countries with better developed and functioning financial systems experience faster economic growth. Financial development also promotes growth as well as improves the distribution of income and wealth.

Levine and Zervos (1998) further opine that differences in long-run economic growth and development in different countries and territories can be explained by differences and development stages in their financial systems. However, Lucas (1988) argued that the financial system does not necessarily promote economic. He contends that any correlations recorded between economic development and the financial system development is as a result of growth leading development implying that financial system actually feeds off growth in the economy instead of feeding the economy. Although this view is not popular in economic and financial research as it has little empirical support, it mirrors some realities that may be existent in third world countries where weak institutional and regulatory frameworks expose the financial system to the manipulation of individuals especially in the political sphere.

This was the case in early military era where commercial and development banks could be arbitrarily established and scrapped with no one held responsible or accountable as to what happened to the funds in such institutions. Thus in course of the development of the Nigerian financial system a myriad of crises were recorded over misappropriation/misapplication and in many cases outright embezzlement of funds from different sources like pension contributions, social insurance funds, mortgage contributions. Consequent on the above, this paper will investigate the role of the financial system in the growth and development of Nigeria.

## **STATEMENT OF PROBLEM**

According to (Merton & Zvi, 1995; Fohlin, 2014), a well-functioning financial systems must provide several core functions which include: Clearing and settling payments; Pooling or mobilizing resources; Transferring economic resources; Managing risk; Pricing

information; and Dealing with information and incentive problems. Where a financial system fails in the above functions, a dysfunctional system may be the result. A close observation of the Nigeria financial system will reveal that Nigeria's financial system remains largely underdeveloped in spite of decades of government actions to improve it (Hashim, 2011; Adeoye and Adewuyi, 2005; Ayadi, Adegbite and Ayadi, 2008).

This is evident in the weak regulatory environment in other non-bank financial institutions, lack of depth in the capital market, weak insurance sector, almost non-existent mortgage sector among many others. Further exacerbating the problem is the failure of financial inclusion policies of successive governments (Ayadi, 2009; Alrabadi & Kharabsheh, 2016; Dabworo & Abimiku, 2016). Most notable is the poor access to financial services (credit) to small businesses and households. And considering that these economic units comprise the overwhelming majority in the economy, their exclusion from mainstream financial activities have led to a situation where economic and financial policies fail to yield desired results and resulting in an undeveloped economy.

Several research efforts have been previously undertaken to unravel the relationship between the financial system and development of economy. However, most are notable for providing conflicting results (Olushola & Makwe, 2018; Nkoro & Uko, 2013; Odufuye, 2017; Uzomba, Nwankwo, Chukwu & Jumbo, 2014). This lack of consensus on the previous empirical research on the subject matter necessitates the present study. In addition, this research provides a more comprehensive treatment of the variables of financial system including aggregate savings and credit to private sector.

## **THE NIGERIAN FINANCIAL SYSTEM**

According to (Merton & Zvi, 1995; Fohlin, 2014), a well-functioning financial system must provide several core functions which include: Clearing and settling payments; Pooling or mobilizing resources; Transferring economic resources; Managing risk; Pricing information; and Dealing with information and incentive problems. Financial systems will provide these services through variety of institutions and markets including among others: banks (commercial, investment, merchant, development etc), savings institutions and thrift societies, credit cooperatives, insurance companies, investment banks, trust companies, pension and mutual funds etc. Institutions come in a wide range of sizes and ownership structures - from public, private partnerships to enormous multinationals to government owned businesses. Financial markets offer centralized, liquid trading in essentially any financial claim, from debt to equities, commodities to foreign exchange, and a wide array of derivatives (Fohlin, 2014).

Beyond the institutions are the regulators like the Central Bank, Securities and Exchange Commission, Deposit Insurance Companies, Insurance Regulators, Corporate Affairs Commission and Asset Management Corporation all established to provide direction and enabling environment for growth and development of the sector? According to the Central Bank of Nigeria, The financial system includes all financial intermediaries that operate in the financial sector of the economy. It provides an enabling environment for economic growth and development, productive activity, financial intermediation, capital formation and management of the payments system. With intermediation, savers lend to intermediaries, who in turn lend firms and other fund using units. The saver holds claim against the intermediaries, in form of deposits rather than against the firm. These institutions provide a useful service by reducing the cost to individuals, of negotiating



transactions, providing information, achieving diversification and attaining liquidity (CBN, 2017).

The concept of the financial system is anchored on the belief that economic agents are categorized into surplus and deficit spending units. The surplus spending units are individuals, groups or organizations operating within the economy that have excess funds above their immediate needs and are willing to make such surpluses available for the deficit economic units. They constitute suppliers of surplus funds to the financial system. On the other hand, the deficit spending units are those that have a shortage of funds and thus require borrowing to fund their operations. They are the users of the excess funds supplied by the surplus spending units in the financial system (CBN, 2017). The financial system provides a platform (through intermediaries) through which the deficit and surplus economic units can meet and fill their financial needs.

The Nigerian financial system includes financial markets (money and capital markets), financial institutions (banks, insurance companies, finance houses, Bureau de change, brokerages etc) regulatory and supervisory authorities (CBN, SEC, NDIC, AMCON, NICON, etc.), development finance institutions (Urban Development Bank, Nigerian Agricultural and Rural Cooperatives bank) and other finance institutions (insurance companies, pension funds, finance companies, Bureau de change, and Primary Mortgage Institutions), among others. It also offers financial instruments (treasury bills, treasury certificates, central bank certificates, etc).

The Nigerian financial system consists of the formal sector (bank and non-bank financial institutions - these are regulated by the government agencies). The informal sector (savings and loan association, local money lenders, etc. these are notable unregulated). The formal sector institutions are regulated by the Federal Ministry of Finance, Central Bank of Nigeria, Nigeria Deposit Insurance Corporation, Securities and Exchange Commission, and the National Insurance Commission etc. The informal sector is largely loosely organized without any form of formal regulation.

With reference to the allocation of resources and economic efficiency, the financial system performs three major functions, which are vital to economic growth and development. First, the system provides convenient and efficient payments system without which specialization in production, so vital to productivity improvements would be greatly impeded. Secondly, the financial system pools savings from net surplus units and channels them to productive investment (CBN, 2017).

According to Ogwumike and Salisu (2013), the Nigeria financial system has experienced intensive restructuring and rapid market-oriented transformations since the adoption of the Structural Adjustment Program (SAP) in 1986. Before then, the Nigerian financial system was regulated as evidenced by ceiling on interest rates and credit expansion, high reserve requirements, selective credit policies and restriction of entry into the banking industry. Following deregulation, the bank and non-bank financial institutions witnessed unprecedented increase due to the incentives provided for growth and expansion of financial institutions. These series of actions to restructure the financial system has yielded some good results like fewer financially stronger and resilient banks.

## **FINANCIAL SYSTEM AND THE ECONOMY - EMPIRICAL REVIEW**

Aigbovo and Uwubamwen (2014) examined the short-run and long-run relationships between financial system development and economic growth in Nigeria. The study adopted

a multivariate OLS analysis for the estimation process, co-integration analysis, the associated error correction model. The findings of the study revealed that financial development (measured by banking system and stock market development) positively influenced economic growth in Nigeria and that causality runs from finance to growth in the finance-growth nexus. It was thus recommended that the ongoing reforms in the banking system and capital market should be intensified so as to boost the development of these segments of the financial system and by that increase their role in economic growth.

Olushola and Makwe (2018) examine the relationship between financial sector development and economic growth in Nigeria with a view to making relevant contributions to existing knowledge and make suggestions that would enhance economic development of Nigeria. The data was subjected to Johansen Rank Cointegration technique, the ADF and PP unit roots test as well as the error correction model (ECM). From the findings, it was revealed that there was a positive and significant relationship between total insurance income and economic growth in Nigeria. The results also suggested that there is a positive and significant relationship between deposit money banks assets, stock market capitalization and economic growth in Nigeria. The research concluded that to achieve a steady economic growth, the financial intermediation should be strengthened through expansion in the capital market, bank consolidation and improvement in the insurance sector.

Ibadin, Moni and Eikhomun (2014) attempted to ascertain the relationship between banking system development and stock market development (financial system development) and economic growth. Using the Co-integration Technique, the ADF Unit Root Test and Error Correction Mechanism, the findings revealed that market capitalization, had short run and long run positive impact on economic growth; credit to the private sector also had a positive impact on GDP and value of share traded in stock market, the turnover ratio, the investments all had positive influence on economic growth. From the above, the financial system can be considered as a tool for short run and long run economic growth.

Adelakun (2010) examined the relationship between financial development and economic growth using the Ordinary Least Square Estimation Method (OLSEM). The result showed that there was a substantial positive effect of financial development on economic growth in Nigeria. The Granger causality test showed that financial development promotes economic growth, but there is evidence of causality from economic growth to the development of financial intermediaries. Thus, advancement of the financial sector development, including diversification of financial instruments should be pursued to facilitate economic development in Nigeria.

Odufuye, (2017) investigated the impact of bank credit on Nigerian economy growth for the period of using time series secondary data sourced from the CBN statistical bulletin and Ordinary Least Square (OLS) estimation technique with the aid of Statistical Package for Social Science. The results revealed that each of the explanatory variables had a non-significant impact on GDP. The result also showed that the joint variables of bank credit have significant impact on gross domestic product for the period under review. The study concluded that bank credit if properly channeled is a catalyst for Nigerian economy growth. The research therefore recommended that the monetary authority should adopt direct credit control measures, where preferred sectors such as Small and Medium Scale Enterprises (SMEs), agriculture, manufacturing and services sectors should be favoured

when granting credits.

Ebiringa and Duruibe (2015) analyzed nature of relationship between financial system development and economic growth in Nigeria using vector autoregressive model. The results reveal that long run causality does not run from financial system development indicators and economic growth, implying that financial system development seem not to significantly catalyze economic growth trends in Nigeria. However, in specific terms, the effect of financial system development on economic growth has been positively significant only in the short run. The paper concludes that for the financial market to adequately support short and long-term growth of the Nigerian economy, the financial system need further deepening through offering and delivery of innovative financial products and service by market operators.

Hashim, (2011) tested the relationship between financial development and economic growth in Nigeria Using Spearman rank correlation coefficient and found out that there is no evidence to suggest a significant relationship between financial development variables: commercial banks assets, liquid liabilities to Gross Domestic Product, commercial banks assets to GDP among others and economic growth in Nigeria for the period under review.

Nkoro and Uko (2013) examined the financial sector development-economic growth nexus in Nigeria using OLS regression analyses models. The findings showed that there is a positive effect of financial sector development on economic growth in Nigeria. However, credits to private sector and financial sector depth are ineffective and fail to accelerate growth. This signifies the effect of government borrowings, the problem of huge non-performing loans, and a deficient legal system on the private sector. These inefficiently and severely limit the contribution of Nigeria's financial sector development to economic growth.

## **METHODOLOGY**

Research design adopted for the research is the ex post facto design. Hence, data was collected from secondary sources inkling the CBN Statistical Bulletins, CBN Abstract of Statistics and was estimated using multiple regression analysis which will be specified to test for the relationship between financial systems as measured by Bank System, Aggregate Domestic Savings, and the Capital Makers. This is expressed as:

$$Y = a + b_1X_1 + b_2X_2 + ..... + b_nX_n + U$$

Where  $Y$  = the dependent or outcome variable

$a$  = constant term

$X_1, X_2 \dots X_n$  = set of independent variables or predictors

$b_1, b_2, \dots b_n$  = coefficients of the predictor variables and

$U$  = the error term.

For the purpose of this study, banking system performance (**BANKPF**) will be measured by aggregate assets of all commercial banks, Aggregate Domestic Savings (**AGSAVE**) while capital market performance will be measured by equities market capitalization (**MKTCAP**) and Money Market performance by FGN Bonds (**FGBOND**). Finally, Economic Development is proxies by Real Gross Domestic Product (**RGDP**).

$$\text{Economic Development} = f(\text{Financial System}) \dots (1)$$

The above model is rewritten functionally as:

$$\text{RGDP} = f(\text{BANKPF}, \text{AGSAVE}, \text{MKTCAP}, \text{FGBOND}) \dots (2)$$

And Econometrically as:

$$\text{RGDP} = \beta_0 + \beta_1 \text{BANKPF} + \beta_2 \text{AGSAVE} + \beta_3 \text{MKTCAP} + \beta_4 \text{FGBOND} + U_t \dots (3)$$

We further convert to their log forms to normalize/standard the dataset:

$$\log \text{RGDP} = \beta_0 + \beta_1 \log \text{BANKPF} + \beta_2 \log \text{AGSAVE} + \beta_3 \log \text{MKTCAP} + \beta_4 \log \text{FGBOND} + U_t \dots . (3)$$

A priori Expectation =  $\beta_1, \beta_2, \beta_3$  and  $\beta_4 > 0$

## DATA ANALYSES, RESULTS AND DISCUSSION

**Table 1: Summary of ADF Unit Root**

VARIABLE	ADF Unit Root Test		
	t-stat	Prob.	Order of integration
RGDP	-3.3397	0.0205	I(1)
BANKPF	-3.3694	0.0196	I(1)
AGSAVE	-4.3472	0.0015	I(1)
MKTCAP	-6.3693	0.0000	I(1)
FGBOND	-7.1240	0.0000	I(1)

From table 1, it can be observed that the data set were stationary at I(1) order of integration. This result implies that after first differencing, the dataset can be relied on for accurate long term prediction. However, the I(1) order of integration also imply that the results of the basic multiple regression analyses may not be accurate for further prediction/forecasting. Consequently, the Auto-Regressive Distributed Lag (ARDL) model was used for all subsequent analyses.

**Table 2: Auto-Regressive Distributed Lag (ARDL) Test**

Variable(s)	Coefficient	t-statistic	Probability
C	-0.3317	-0.6080	0.5529
RGDP	1.0413	-7.7822	0.0000
BANKPF	0.0999	1.0145	0.3276
AGSAVE	0.1050	2.0066	0.0645
MKTCAP	-0.0352	-1.3756	0.1906
FGBOND	-0.0730	-1.7837	0.0962
R2 = 0.998; R <sup>2</sup> Adjusted = 0.997; F-Statistic = 738.32; Prob (F-Statistic) = 0.000; DW = 2.464			

The ARDL model result in table 2 indicates that there is a positive relationship between real gross domestic product (RGDP) and aggregate commercial banks assets in Nigeria. The value of the coefficient of regression of 0.0999 implies that one percentage change in aggregate bank banking sector assets will lead to a 9.9% change in RGDP in the same direction. However, the probability of t-statistic for the variable gave a value of 0.3276 with the implication that the result is not statistically significant.

Furthermore, the regression coefficient for Aggregate domestic savings gave a value of 0.105. This result implies a positive relationship between real gross domestic product



and aggregate domestic saving in Nigeria. This means that increase in aggregate domestic savings will lead to increase in RGDP and vice versa. However, the result is not statistically significant as can be observed from the probability of t-statistic value of 0.0645 which is marginally higher than the critical limit of 0.05.

On the other hand, the regression coefficient for stock market capitalization gave a negative value of -0.0352 which implies that there is a negative relationship between stock market capitalization and the RGDP with a percentage increase in stock market performance predicted to lead to 3.5% decrease in RGDP and vice versa. The probability of t-statistic value of 0.1906 implies that the result is not statistically significant.

Finally, the coefficient of regression for federal government bonds gave a negative value of -0.0730 which implies that a percentage increase in government borrowing through the bonds market will have the effect of decreasing RGDP by 7.3% and vice versa. This result is also not statistically significant like in the other cases above.

**Table 3: ARDL Co-integrating Long-Run Coefficients**

Variable	Coefficient		t-Statistic	Prob.
	t	Std. Error		
LN BANKPF	-6.441624	20.651581	-0.311919	0.7597
LN AGSAVE	0.539106	1.608200	0.335223	0.7424
LN MKTCAP	1.718095	6.038545	0.284521	0.7802
LN FGBOND	4.763645	15.040035	0.316731	0.7561
C	8.032706	13.296707	0.604112	0.5554

The ARDL Co-integrating and Long Run Form Results in the table 3 above provide information on the nature of the long-run relationship between the dependent and independent variables. From the long-run coefficients, none of the financial system variables - aggregate commercial banks assets (BANKPF), aggregate domestic savings (AGSAVE), stock market capitalization (MKTCAP) and federal government bonds (FGBONDS) had a statistically significant long-run relationship with real gross domestic product. This can be observed from the probability of the t-statistic for the long run coefficients with values of 0.7597; 0.7424; 0.7802; and 0.7561 respectively BANKPF, AGSAVE, MKTCAP and FGBOND.

## **DISCUSSION OF FINDINGS**

This research paper investigated the relationship between financial system and the economy in Nigeria for the period 1981 to 2017. Data for the study was collected from secondary sources and analyzed using Augmented Dickey-Fuller unit root test, Autoregressive Distributed Lag (ARDL) model and Co-integration test. The findings shows that: there is a positive statistically insignificant relationship between real gross domestic product and aggregate commercial banks assets in Nigeria implying increase in commercial banks assets will lead to increase in real gross domestic product.

Olushola and Makwe (2018) in a similar study determined that there was a positive and significant relationship between deposit money banks assets, stock market

capitalization and economic growth in Nigeria. The research concluded that to achieve a steady economic growth, the financial intermediation should be strengthened through expansion in the capital market and bank consolidation. Furthermore, Odufuye (2017) also showed that bank credit had significant impact on the economy and concluded that bank credit if properly channeled is a catalyst for Nigerian economy growth.

Furthermore, the results show that there is a positive relationship between real gross domestic product and aggregate domestic saving in Nigeria. This means that increase in aggregate domestic savings will lead to increase in RGDP and vice versa. However, the result is not statistically significant implying that aggregate domestic savings does not significantly affect the economy. The results also show that stock market capitalization has a non-significant negative relationship with the economy with an indication increase in stock market capitalization will lead to deterioration in the economy. However, Aigbovo and Uwubamwen (2014) in their study revealed that stock market development positively influenced economic growth in Nigeria.

Finally, the results indicate that federal government bonds have a negative relationship with the economy. This result is also not statistically significant like in the previous cases above. From the long-run coefficients, none of the financial system variables - aggregate commercial banks assets (BANKPF), aggregate domestic savings (AGSAVE), stock market capitalization (MKTCAP) and federal government bonds (FGBONDS) had a statistically significant long-run relationship with real gross domestic product. This finding is corroborated by that of Nkoro and Uko (2013) who showed in their research that government borrowing led to deterioration of the Nigerian economy.

## **CONCLUSIONS AND RECOMMENDATIONS**

From the findings, it is observed that aggregate commercial banks assets and domestic savings followed the a priori expectation by recording positive relationships with the economy. However, the findings were both findings were not statistically significant. From this finding, we conclude that commercial banks' assets and domestic savings are performing below expectation in driving economy development. However, stock performance and federal government bonds in relationship to the economy deteriorate economic development. This we conclude is as a result of misapplication of investment funds both in the public sector (federal government bonds) and private (stock market) sectors. In all, it is concluded that the financial system is not contributing meaningfully to economic development in Nigeria. Thus, it is recommended that policies to help reposition the financial system are required. This should include deepening the financial system and enhancing its ability to mobilize the necessary resources to drive economic growth and development. There is need to ensure that the properly monitor the utilization of funds raised through issuance of bonds. Finally, we recommend that activities in the stock market be properly monitored to avoid the problem of insider information abuse and boost investors' confidence.

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## ICT and Sustainable Development in Nigeria

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**Abstract:** This study dealt on ICT and sustainable development in Nigeria, it has been observed globally that ICT is essential both to eradicate poverty and improving human capacity, ICT advances economic, social, cultural and political initiatives in ways that affect all stakeholders positively when done correctly. Therefore, it is the aim of this study to determine how ICT assist in sustainable development. This paper used the secondary method of data collection. Many literatures were reviewed. It was concluded that ICT can create cost competitiveness among nations. It helps to bring technology to remote areas where traditional technology would have been costly. It was therefore recommended that if Nigeria intends to meet up with sustainable development, it must encourage its citizens on the use of ICT to advance innovation and eco-friendly solutions to on-going problems.

**Key words:** Information, Communication, Technology, Sustainable and Development

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### INTRODUCTION

#### 1.1 BACKGROUND OF THE STUDY

One of the major challenges today in developing countries of which Nigeria is one is sustainable development. Government is faced with the challenge of transformation, a paradigm shift necessitated by the age of network intelligence. Internally, the government is called to improve the efficiency and effectiveness of internal functions and processes within government departments and institutions through internetworking while externally government are called to be more transparent and give citizens access to government information.

According to Ayodele (2007) sustainable development can be broadly defined as the ability of the economy to support the needs of the people of a country over a time, taking into consideration the economic, social and ecological constraints of the country. Amodu



(2008) states that sustainable development is a process rather than an end goal. He further noted that this process requires constant evaluation and analysis of the emerging trend in the discussion so as to take the issue of sustainable development to the next level. Sustainable development simply put is developing for the present and future, the process of ensuring that the present development is sustained and maintained or the future. Plans, projects and programmes have been formulated by successive governments in Nigeria to improve the lives of its citizens which are the main aim of development – empowering citizens not only for the present but for the future.

Information and Communication Technology (ICT) which include digital technologies like computers and the internet as well as radio and television have been touted as the potential tool for educational growth and sustainable development in Nigeria. Emenari (2004) noted that ‘great transformations in the lives of the people are in part a function of advances in Information and Communication Technologies (ICTs).’ Onwubualili (2004) added that “the magical changes are quite glaring in every facet of our lives and touches the simplest of domestic services to corporate and limitless industrial applications.”

ICTs like the internet according to Nwanjika (2004) creates and meets demand which satisfies human and corporate needs. ICTs have been key enablers of globalization facilitating worldwide flow of information capital, ideas, people and products. They have transferred businesses, markets and organisations, revolutionized learning, empowered citizens and communities and created significant socio-economic growth in many countries. In recent years developing countries like Nigeria have started taking concrete actions to incorporate Information and Communication Technology into their economic policies and development agenda.

There are no doubt that information and Communication Technology has found its niche in every of Nigeria’s Polity. When used appropriately ICTs can help Nigeria as a developing nation to access sustainable development. They are what are needed to climb the heights developed countries have reached. However, how developing nations such as Nigeria use ICT to derive sustainable development becomes pertinent and is therefore the focus of this paper.

Gilholly (2005) proffered that ‘for ICT to positively foster development goals, it must be employed where relevant, appropriate and effective.’ Heeks (2010) in addition opined that because of the speed at which digital technologies are changing the modus operandi of developing countries, and equally the rate at which development initiatives using ICT fails, enterprises and government alike should take the extra precaution to recognize that sustainable development is more than a mere transfer of technology from the North to the South. He posited that to the extent that sustainability is possible is to the degree that appropriate alignment between infrastructure and need meet. Otherwise, the only benefit will be wasted expenditures. We have seen dramatic technological advancement in the digital world, especially within the telecommunications sector. New entrants to the Nigerian market dominate the technology environment and are exceptionally profitable. In this new dispensation of globalization, we have seen a wave of enthusiasm and enormous contribution to poverty alleviation in countries such as India and China. Nevertheless, one ought to be careful in how one advances the development of ICT initiatives.

Singh (2011) opined that “ICT provides new opportunities for those who are literate, have a good education and adequate resources. Disadvantaged and marginalized

groups have little chance to benefit from tools such as the Internet automatically. This further increase social divides, widens the gap between rich and poor countries, regions, individuals and even between men and women". The challenge therefore becomes how countries and enterprises engage the use of ICT in strategic ways that advances 'economic, social, cultural, and political' endeavors for all its stakeholders in advancing sustainable development.

When one considers sustainable development in any realistic way, the balancing act lies between how individuals need are satisfied and how well one preserve the ecosystem and all natural resources. This is not necessarily an easy equilibrium to achieve. However, without it, sustainability may evade its implementers. We have seen tremendous advances in the role of e-government, for example, and the abilities it gives to citizens to be more productive. This initiative needs to continue by integrating services across departments and ministries. It is not simple to determine and master the complexities surrounding socio-environmental challenges but sustainability is impossible without such comprehension. Inas (2005) posited that any opportunity to effect sustainable development requires that new and efficient qualitative evaluation schemes coupled with "an integrated assessment of the ecological, social, and economic features and implications of a given project, technology or agro-ecosystem through the use of appropriate indicators" be executed. Sustainable development takes time but its benefits are materially rewarding. Sustainability also requires cooperative and collaborative endeavors that advance positive relationships between the various indices. One must therefore, be mindful not to confuse piecemeal approaches, such as sectoral management with sustainable development because although local zones can attempt to manage their own affairs, until there is a common purpose in recognizing a single solution for prevailing problems, the likelihood of problems recurring will hold strong possibilities.

The United Nations millennium development goals (MDG) hope to address the dysfunctional trend in human development within a relatively short period. Although achieving the MDG deadline might be optimistic - 2015, its eight objectives are essential to good governance for sustainable development. These goals are: (1) eradicating extreme poverty and hunger, (2) achieving universal primary education, (3) promoting gender equality and empowering women, (4) reducing child mortality, (5) improving maternal health, (6) combating HIV/AIDS, malaria and other diseases, (7) ensuring environmental sustainability, and (8) generating a global partnership for development. Although number seven is listed separately, the prevailing contemporary environment dictates that all eight shares a phenomenological umbilical relationship and ICT is fundamental to realizing such noble endeavors. More countries and enterprises are recognizing the importance of ICT to poverty alleviation. A poor woman farmer in a rural community can use a telephone to enquire about her vegetable prices without the overhead of a bus fare or the physical endurance such journey require. One will agree, however; that such possibilities arise out of the willingness to invest financial resources, ICT infrastructure, and capacity building.

## **2.1 CONCEPTUAL FRAMEWORK OF ICT**

Gilholly (2005) argued that if countries want to tackle the MDG seriously, they must appropriately deploy, integrate, and prioritize ICT. The author noted that ICT is essential both to eradicating poverty and in creating sustainable human development. He conceded, however, that the paradox of "persistent scarcity in a digital era of superabundant capacity

– is perhaps the greatest single challenge to the networked economy and society.” He further opined that because of the complex prevailing realities, grasping fulsome clarity is difficult to achieve. Nevertheless, Gilholly (2005) proffered that if ICT is situated appropriately, it can significantly aid the process of the MDG in relatively short periods thereby substantially reducing the gap between the advanced nations and emerging economies such as Nigeria.

When one considers some of the broad issues of sustainability, ICT undoubtedly will contribute positively. Examples may include the impact of technology on the lives of the physically disabled, community development, health, social security, education, and grassroots businesses, among the huge list of possibilities. The physically challenged can use technology to work from home through the invention of teleworking for persons with disabilities. Community development activities can be enhanced and supported through ICT, such as the Society for Research and Initiatives for Sustainable Technologies and Institutions initiative in which the purpose is to encourage the use of ICT to advance innovation and eco-friendly solutions to ongoing problems. Ideas can be adopted from what is done in places such as RajNidhi in Rajasthan, India where ICT is used to provide its citizens with information, such as health, family planning, employment, transportation, distance education, agriculture, water, electricity, birth and death registration, and tax rates along with many other services. Health facilities sharing health records can respond timely to individual health concerns and make more accurate decisions about health-related problems. ICT can inform members of a community about social services available and the benefits to which each individual is entitled. Technology is revolutionizing the way persons learn. World Corps, for example, use ICT to impart technical and business related skill-sets to disadvantaged persons by promoting employment through sustainable and environmentally sound enterprises, such as Internet centers whereas Community Learning Center, also in India, use technology to enhance elementary education and computer literacy among poor children. (Sameer, 2011) is of the opinion that grassroots businesses can use the Internet to sell their produce through an auction system. They can apply the technology in ways that provide information for crop production, cultivation practices, marketing initiatives, processing standards, and pest and disease control. In addition, community based initiatives include engaging the technology to advance and expand micro-financing and micro-enterprise.

## **2.2 THEORETICAL REVIEW ON ICT**

According to Wikipedia (2010), theories of technology attempt to explain the factors that shape technological innovation as well as the impact of technology on society and culture. Most contemporary theories of technology reject two previous views: the linear model of technological innovation and technological determinism. To challenge the linear model, today's theories of technology point to the historical evidence that technological innovation often gives rise to new scientific fields, and emphasizes the important role that social networks and cultural values play in shaping technological artifacts. To challenge technological determinism, today's theories of technology emphasize the scope of technical choice, which is greater than most lay people realize; as science and technology scholars like to say, “it could have been different.” For this reason, theorists who take these positions typically argue for greater public involvement in technological decision-making



### **2.2.1 Social theories**

Social theories focus on how humans and technology affect each other. They argue that technology does not determine human action, but that human action shapes technology. Some of these theories focus on how decisions are made with humans and technology: humans and technology are equal in the decision, humans drive technology and vice versa. The interactions used in majority of the theories look at individual human interactions with technology, but there is a sub-group for a group of people 'interacting with technology. The theories described are purposefully vague and ambiguous, since the circumstances for the theories change as human culture and technology innovations change. Key authors include Mackenzie and Wajcman (1985).

### **2.2.2 Actor-network theory**

Actor Network Theory posits a heterogeneous network of humans and non-humans as equal interrelated actors. It strives for impartiality in the description of human and nonhuman actors and the reintegration of the natural and social worlds. For example, Latour (2011) argues that instead of worrying whether we are anthropomorphizing technology, we should embrace it as inherently anthropomorphic: technology is made by humans, substitutes for the actions of humans, and shapes human action, what is important is the chain and gradients of actors' actions and competences, and the degree to which we choose to have figurative representations. Key concepts include the inscription of beliefs, practices, and relations into technology, which is then said to embody them.

### **2.2.3 Structuration Theory**

Poole (2011) defines structures as rules and resources organized as properties of social systems. The theory employs a recursive notion of actions constrained and enabled by structures which are produced and reproduced by that action. Consequently, this theory technology is not rendered as an artifact, but examines how people, as they interact with a technology their ongoing practices, enact structures which shape their emergent and situated use of that technology. Key authors include DeSanctis and Poole (2009).

### **2.2.4 Systems Theory**

This theory considers the historical development of technology and media with an emphasis on inertia and heterogeneity, stressing the connections between the artifact being built and the social, economic, political and cultural factors surrounding it. Key concepts include reverse salient when elements of a system lag in development with respect to others, differentiation, operational closure, and autopoietic autonomy. Key authors include Hughes and Luhmann (2008).

### **2.2.5 Activity Theory**

These works consider an entire work/activity system (including teams, organizations, etc.) beyond just one actor or user. It accounts for environment, history of the person, culture, role of the artifact, motivations, and complexity of real life, activity. One of the strengths of AT is that it bridges the gap between the individual subject and the social reality it studies both through the mediating activity. The unit of analysis in AT is the concept of object-oriented, collective and culturally mediated human activity, or activity system.

### **2.2.5 Group Theories**

There are also a number of technology related theories that address how (media) technology affects group processes. Broadly, these theories are concerned with the social effects of communication media. Some (e.g., media richness) are concerned with questions of media choice (i.e., when to use what medium effectively). Other theories (social

presence, SIDE, media naturalness) are concerned with the consequences of those media choices (i.e., what are the social effects of using particular communication media).

#### **2.2.6 Social presence theory**

Social presence theory is a seminal theory of the social effects of communication technology. Its main concern is with telephony and, telephone conferencing. Satope (2012) argues that the social impact of a communication medium depend on the social presence it allows communicators to have. Social presence is defined as a property of the medium itself: the degree of acoustic, visual, and physical contact that it allows. The theory assumes that more contact will increase the key components of “presence”: greater intimacy, immediacy, warmth and inter-personal rapport. As a consequence of social presence, social influence is expected to increase. In the case of communication technology, the assumption is that more text-based forms of interaction (e-mail, instant messaging) are less social, and therefore less conducive to social influence.

#### **2.2.7 Media Richness Theory**

Daft and Lengel(2010) are of the view that media richness theory shares some characteristics with social presence theory. The theory posits that the amount of information communicated differs with respect to a medium’s richness. The theory assumes that resolving ambiguity and reducing uncertainty are the main goals of communication. Because communication media differ in the rate of understanding they can achieve in a specific time (with “rich” media carrying core information), they are not all capable of resolving certainty and ambiguity well. The more restricted the medium’s capacity, the less uncertainty and equivocality it is able to manage. It follows that the richness of the media should be matched to the task so as to prevent over simplification or complication.

### **2.3 EMPIRICAL REVIEW ON ICT**

Sunil, Forell, Morgeson and Krishnan (2008) in their study of the effect of information technology investment on customer satisfaction hypothesized that IT investment is positively related to perceived quality and perceived value, the study findings revealed that IT investment have a positive effect on perceived quality and perceived value firms in the service sectors than in the manufacturing sector. Also Sunil, Ramasubba and Sambamurthy (2011) studied information technology infrastructure capability and firm performance. The study revealed that ITI is positively related to customer and market usage, process management and performance management of firm’s performance respectively. Marchand, Kettinger and Rollins (2009) studied the link between information technology and firm performance and their study revealed that three set of factors keeps a firms performance, the quality of IT management practices. IT management processes should sense, gather, organize and disseminate information, in other words IT management is positively related to a firms performance and continual existence.

Sambamurthy, Ramasubba and Sunil (2010) in their study revealed that information technology infrastructure capabilities in firm impacts customer focus and market focus. This in other words means that IT infrastructure capabilities enable firms to position their IT asset so as to capture information about customers as well as disseminate information to customer in other to create satisfaction. Also Sambamurthy (2010) in another study argue that IT capabilities have a positive impact on the quality of organizational processes and the development of digital process and the development of digital process capabilities.

Gilannia and Sunil (2011) in their work 'the impact of information technology application on supply chain performance' found that information technology impacts supply chain strategy and that information technology has more relationship with responsiveness supply chain, meaning IT impacts supply chain performance in an organization. Melville (2009) in his study suggested IT and the complementary resources of the firm affected the effectiveness of business processes which consequently improved organizational performance.

Karimi and Jahagir (2010) in their study revealed that good IT planning and integration are more effective at improving customer service. Ting (2010) in his study 'impact of information technology on firm's performance' argued that IT impact firm's financial efficiency and capability performance, respectively. Ray (2010) also found that there were no direct effects of three different IT resources (technical skills, manager technology knowledge, and IT spending) on the performance of customer vice process.

### **2.3.1 Compatibility**

According to Duncan (2008), Compatibility is the ability to share any type of information across the technology component throughout the organization. Mohammad and Kamaruzaman (2009) opined that Information Technology compatibility help span organization boundaries, employee empowerment, make information and knowledge available in the organization. Gibson (1993) noted that compatibility addresses the need for uniformity in technology across the organization. Kamal (2013) in his study revealed a positive correlation between compatibility and reliability of service. Akbulut (2012) in his study observed that compatibility is positively correlated with access to service, in that compatibility creates ease of use.

### **2.3.2 Connectivity**

Duncan (2008) observed that connectivity is the ability of any technology components to communicate with any of the other components inside and outside of the organizational environment. According to Chaung (2009) Information Technology connectivity enable seamless and transparent organisations that are independent of time and space. Keen (1991) described connectivity as the physical presence of information technology that binds the organization together. He further suggested the term "reach", to address the issue of connectivity. He defined reach as the location that can be connected via the IT infrastructure.

Keen (2010) also noted that 'reach' is required to achieve an organization's desired level of data transparency. In addition Byrd and Turner (2010) noted that connectivity refers to the ability of any technology to attach to any of the other technology component. It also means that every person, every functional area, and every application in the organizations are linked to one another. Mohammad and Kamaruzaman (2009) hypothesized and found that connectivity is correlated with reliability. While Chaung (2010) hypothesized and found that connectivity is significantly correlated with access.

## **2.4 SUSTAINABLE DEVELOPMENT**

According to Stern (1997), sustainable development first appeared in the World Conservation Strategy put forward by the International Union for the Conservation of Nature (IUCN) in 1980 where economic growth was seen as an enemy of environment. But prominent meaning of Sustainable development is the Brundtland Report (WCED, 1987) which proposed that sustainable development is "development that meets the needs of the

present generation while letting future generations meet their own needs. In recent years, economists have made progress in articulating their conception of sustainability. Crucial to this is that scholars have been able to synthesize SD into three pillars; economic development, social equity and environmental protection pillars (United Nations, 2007).

There are two main criteria of sustainable development; Weak Sustainability (WS) and Strong Sustainability (SS). "Weak sustainability" refers to non-declining total capital (productive base) in the form of physical, human and natural capital. The WS rents from natural resources could be invested (substituted) in manmade capital and/or human capital to ensure sustainable development. Strong sustainability on the other hand, means a threshold level of some forms of capital (physical, human, social, and natural) to be preserved in physical terms. According to Amsalu (2011), it is the WS criterion that is being employed most widely because of scarce resource with alternative uses. Weak sustainability is all about forms of capital that are substitutable for each other. More so, requires in addition to WS, the stocks of capital (K) should not be declining. Adejumo and Adejumo (2014), stated that "Addition to" is preferred because a situation in which natural capital is preserved while other forms of capital are allowed to decline significantly can hardly be called "sustainable development". Tern (1997) stated that there is a consensus among a large number of economists that weak sustainability supports the capital theory approach (CTA) and is a useful means of measuring sustainability especially in inform of policy making. (Common and Norton 1994) noted that there are also a growing number of critics who question whether this is a useful way to address sustainability.

Though the human needs included in the definition is of recent thinking, Soubbotina (2004) and Harry (2010) views that human beings are the epicenter for sustainable development. The criterion of this study is trying to capture sustainable development as much as possible from the weak sustainable development capital approach (productive base) that is substantial to be bequest to next generation with human capital bias, a position Martin (2006), also agreed. Eric (2010) equated weak sustainable development with sustained growth. The productive base consists of all forms of capital assets in a given economy such as; physical (reproducible- manufactured) capital, human capital (skills and knowledge embodied in humans) natural capital (energy, minerals, forests, water, and land). An example is how provision of Air condition (AC) suffices heat caused by high temperature in the daytime.

Here, the pillars or elements of the sustainable development are roughly subsumed as productive inputs. These are the inputs of production process that drives any economy to be sustainable development or not and are broadly categorized as; land (all natural resources or capital), labour (energy, person-hours, aspects of human capital), and capital (real and working capital, financial capital, manufactured capital etc.). According to Seidler (2000), most neoclassical economists are of this view especially the famous Cobb Douglas production function in 1928 where he assumed input substitutability factors of production function.

## **2.5 EFFECT OF ICT ON NIGERIA'S SUSTAINABLE DEVELOPMENT**

Although grasping the phenomenological inter relationships and interconnectedness concept between sustainability and development may be somewhat arduous, such realities cannot be ignored. (Baudouin, 2009) is of the view that contemporary cities, towns, etc. need to share data for effective urban planning. Without such cooperation, the three

fundamental characteristics of sustainability: environmental, economic, and societal responsibilities will not materialize. Enterprises and governments alike must therefore enact initiatives that build cities, towns, and other communities that are “economically efficient, socially equitable and ecologically viable”. In the absence of these key factors, sustainability is impossible. Cities constantly evolve hence the digital impact on such dynamism must therefore be factored in terms of its impact on transportation and other urban facilities and how people deploy the technology to stay connected and to make choices. Sustainability must be seen as a strategic endeavor in the face of rapid urbanization across countries and cultures. In this regard, sustainable development must go beyond using cell phones merely to chat. Enriching data services would be a step in the right direction to conduct banking, financing, and other such financially viable services.

Baudouin (2009) also proffered that with proper sustainability adaptation, homes could transform relationships, for example, the electric company implementing smart meters. He further opined that portable devices can increase worker productivity substantially. He argued that such improvements can occur in public services, tourism, culture, social interactions, community development, and in governance at the local and national levels. The BEEP methodology (Best eEurope Practices) funded by the European Commission, for example, documents workable solutions across the globe readily available for adaptation. The method gives planners and implementers the ability to adopt good practices, exercise proper evaluation, analysis, and learning, thereby creating an effective knowledge management system for sustainable deployment. According to Odamtten and Millard (2009), Eastern Europe and the Mediterranean benefitted significantly in using BEEP to transform their economies as a precursor to enter the European Union whereas the Pan-African region is slowly getting on board. Inherent in the BEEP method, is the recognition that there is no absolute solution. Each region and countries differ on many variables, such as culture, governance, economics, and skill-sets.

Initiatives from the above can lead to gender equality through empowerment, development through capability building, and through alternatives that propel competitiveness. Emerging strategies may include economic growth, sustainable livelihood, and increased freedom for capacity enhancement and expansion. In addition to the foregoing, free and open source software (FOSS) presents countries with unique opportunities for sustainable development. Papua New Guinea, a country that relies heavily on Australia for just about everything economic, embraced FOSS and used it as a driving force to implement cutting-edge information technology solutions comparable in price to developed states. Papua New Guinea chose FOSS, not because the country could not implement telecommunications technology in the way others have, but because to do so would make the service cost disadvantageous in comparison to advanced economies. FOSS was the clear choice to maintain comparable cost structures. If one should examine the price of Windows XP as an illustration, acquiring a copy in the United States is likely cheaper than to do so in Nigeria. Proprietary software are priced per market segment and the poorer the segment, the higher the price. FOSS removes such restrictions. Open source software maintains similar price structures irrespective of markets. In addition, such prices tend to be lower than their comparative proprietary choices. Wheeler, as cited by Reijswoud (2009) noted that: Briefly, free and open source software programs are programs whose licenses give users the freedom to run the program for any purpose, to



study and modify the program, and to redistribute copies of either the original or modified program (without having to pay royalties to previous developers).

According to Reijswoud (2009), although one should indicate that open source software is not always free, FOSS with its bazaar and study development method steeped in sound academic principles, provide considerable advantages. These may include lower total cost of ownership, free base level technical support, fee for service for popular open source software (Red Hat, IBM, Novell, Sun, Oracle,) and shared ideas and knowledge among programmers.

## **CONCLUSION**

There are challenges to using ICT as the driving force for sustainable development. However, ICT provide its greatest hope. This paradox, although cannot be ignored must be assessed in the context of modernity and the role that ICT enjoy in the contemporary context. ICT advances “economic, social, cultural, and political” initiatives in ways that affect all stakeholders positively when done correctly. ICT situate countries and enterprises to achieve sustainability in efficient ways. ICT furnish the platform to integrate “assessment of the ecological, social, and economic features and implications of a given project, technology or agro-ecosystem through the use of appropriate indicators. ICT is therefore, an appropriate tool for advancing sustainable initiatives. Without ICT, many of the contemporary benefits occurring globally would not have likely materialized. To this extent, emerging economies can use ICT to their advantages. ICT can create cost competitiveness by neutralizing extenuating circumstances. ICT accrue benefits to regions by bringing technology to remote areas where traditional technology would have been too costly. Sustainable development through ICT initiatives is therefore a reality need only to be embraced by those who realistically demand societies that are more equitable.

## **RECOMMENDATIONS**

- ❖ Competent and experienced ICT experts should be recruited by the state and federal government as instructors to sustain and make the programme sustainable.
- ❖ Government policies should be geared towards indigenous firms/entrepreneurs and encourage her citizens to invest in information and communication Technology
- ❖ Form the primary to the tertiary education level, ICT and other related courses should be encouraged that will prepare the teeming graduates to be job creators and not job seekers.
- ❖ To make the ICT programme more sustainable, rural areas, children, youths and adults should be identified and trained to bridge the gap.

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# Skill Acquisition and Employability of Nigerian Graduates

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**Abstract:** Some empirical studies have blamed Nigeria's high rate of unemployment on non – possession of employable skills by our teeming graduates. To this end, this paper on Skill Acquisition and Employability of Nigerian Graduates focused on finding out if the unemployment status of Nigerian graduates is as a result of the absence of employable skills. The researchers made use of primary source of data and the major instrument used was a self administered questionnaire. A sample size of three hundred and twenty four was used and this was determined using the Cochran formular. Copies of the questionnaire were administered on graduates drawn from Abia State using convenience sampling technique. The statistical analysis was done using simple percentages, discriminant analysis and correlation analysis as aided by SPSS Version 25. The paper revealed that Nigerian graduates acquisition of basic employable skills does not significantly determine their employability status (other factors must have contributed to the alarming increase in unemployment); there is a significant relationship between acquisition of employability skills by Nigerian graduates and their exposure to vocational skills in schools. To this end, the paper recommended that employment opportunities should be created by governments at all levels to reduce this alarming rate of unemployment in the country instead of blaming unemployment on lack of employability skills; finally the government should ensure that many vocational skill courses are well taught in our tertiary institutions to make graduates self employed. Where this is done right, the burden of unemployment on government will be reduced.

**Key words:** Skill Acquisition, Employability Skill, Employee/Employer Skill Gap

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A Special Issue Conference Proceeding Paper

## 1. INTRODUCTION

Nigeria has experienced significant increases in graduate unemployment rate over the past decades, with an average rate of 23% percent between 2016 and 2018. Furthermore, the

National Bureau of Statistics (NBS) places the number of unemployed youths at 6 million or 33.1 percent of total unemployed Nigerians in 2017. This is almost double the number in 2012. Available data from the National Universities Commission (2004) revealed that massive unemployment exists among most graduates of tertiary institutions in the country - a situation that is said to be traceable to the disequilibrium between labour market requirements and essential employment skills of these graduates. John (2018) opined that the labour market in Nigeria is characterized by a significant mismatch between skills demanded by employers and those possessed by these young prospective workers, which has led to an increase in youth unemployment rates. Graduates of tertiary institutions remain unemployed for up to five years after graduation, partly because they lack market-relevant skills, and also because job creation has not kept up with the increase in the young adult population.

Dabalén, Oni and Adekola (2000) and National University Commission (2004) assert that there are other attributes (non-academic skill requirements) which employers of labour emphasize that graduates should have despite their academic qualifications. Given this disequilibrium as well as the state of the economy, it becomes imperative to ultimately carry out this study on skill acquisition and Nigerian graduates employability.

## **1.2 STATEMENT OF THE PROBLEM**

The rate of unemployment in Nigeria is soaring, as graduates are churned yearly. Sodipo (2014), in an empirical study revealed that the height of unemployment in the country is as a result of graduate employees falling short of employers' expectations in terms of employable skills, thereby creating an employability gap. Is lack of employable and vocational skills the root cause of unemployment? Could a graduate possess these skills and still be unemployed, and if it is possible, could there be other factors that play out in this scenario? Were our graduates actually exposed to vocational studies, and to what extent did they acquire such skills while in school as undergraduates?

## **1.3 OBJECTIVES OF THE STUDY**

The specific objectives of this research paper are to:

1. determine if the acquisition of basic employable skills by Nigerian graduates affect their employment status;
2. find out if there is any relationship between employability skills expected of graduates by employers and the vocational skills they acquire in schools.

## **1.4 RESEARCH QUESTIONS**

1. To what extent does the acquisition of basic employable skills by Nigerian graduates affect their employment status?
2. What is the extent of relationship between vocational skills acquired by students in schools and employability skills expected of them by employers?

## **1.5 RESEARCH HYPOTHESES**

The following two research hypotheses shall be tested in this research work:

$H_{01}$ : Nigerian graduates acquisition of basic employable skills does not significantly determine their employability status.



$H_{02}$ : There is no significant relationship between acquisition of employability skills by Nigerian graduates and their exposure to vocational skills in schools.

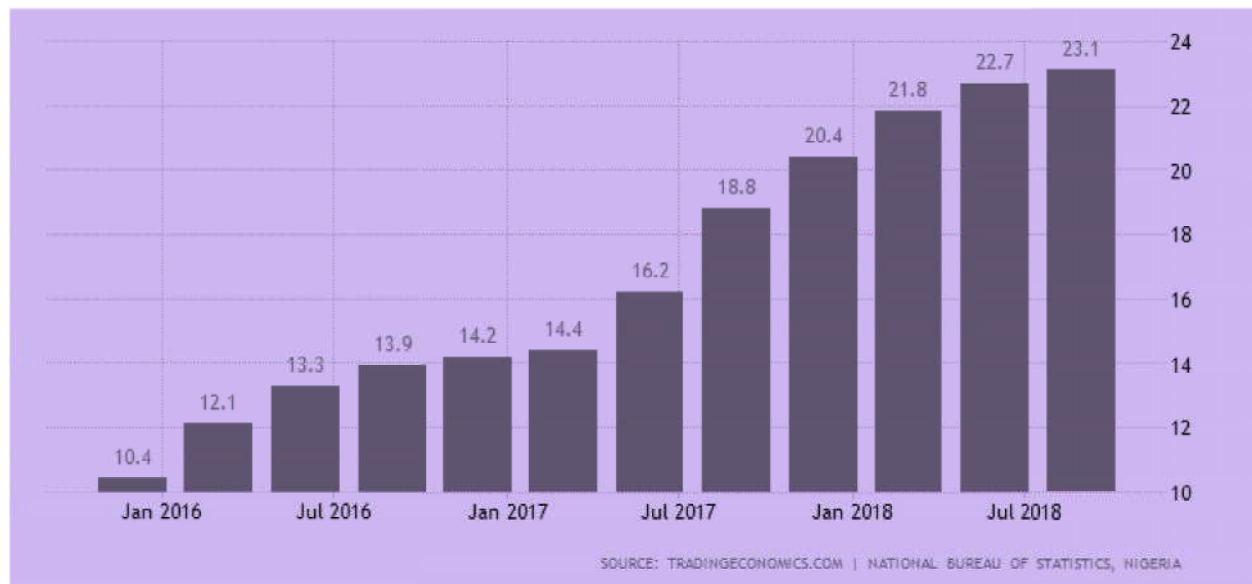
## **2. REVIEW OF RELATED LITERATURE**

### **2.1 THEORETICAL REVIEW**

#### **Unemployment Rate**

Wikipedia sees unemployment, or joblessness, as a situation in which able-bodied people who are looking for a job cannot find a job. It is a situation where people who are strong enough to be gainfully employed are without jobs. Every country strives to keep statistics that reflect the rate at which this situation improves or deteriorates. Therefore, unemployment rate reflects the inability of an economy to generate employment for those persons who want to work but are not doing so, even though they are available for employment and actively seeking work. It is thus seen as an indicator of the efficiency and effectiveness of an economy to absorb its labour force and of the performance of the labour market (ILO, 2013). Unemployment Rate in Nigeria increased to 23.10 percent in the third quarter of 2018 from 22.70 percent in the second quarter of 2018. Unemployment Rate in Nigeria averaged 12.31 percent from 2006 until 2018, reaching an all time high of 23.10 percent in the third quarter of 2018 and a record low of 5.10 percent in the fourth quarter of 2010 (NBS,2019).

**Table 2.1 Unemployment Rate in Nigeria (2016 -2018)**



From the chart above, it is glaring that the unemployment rate in Nigeria progresses with time. It was at its lowest ebb of 10.4% in Jan 2016, but as at July 2018, the unemployment rate soared to 23.1%.

#### **Causes of Unemployment in Nigeria**

Ayinde (2008), Morphy (2008), Awogbenle and Iwuamadi (2010), Adebayo (1999) and Alanana (2003) in their various studies on unemployment pointed out the following as some of the causes of unemployment in Nigeria:

**1. Rapid Population Growth**

The current population of Nigeria as at the 13<sup>th</sup> day of August, 2019 was 203,085,343 (UN, 2019). With the population growth rate of 3.2% and unemployment rate of 23% per annum, it is obvious that unemployment situation in Nigeria is not getting better unless some decisive measures are taken.

**2. Rural Urban Migration**

As youths move from rural areas where they are likely to be engaged to urban areas that are already congested, they further worsen the unemployment situation in the country.

**3. Low standard of Education**

Uddin and Uddin (2013) averred that the curricular of Nigerian tertiary institutions do not make it possible for undergraduates to be well trained in those areas that are likely to empower them and ultimately make them job creators instead of job seekers tomorrow. This could be why most researchers affirm that Nigerian graduates are unemployable.

**4. Rapid expansion of the education system**

Graduates are churned out at an alarming rate in Nigeria. Amidst the unemployment crisis, these graduates are released into the labour market without the government creating the needed jobs to bridge the unemployment gap.

**5. Corruption**

Corruption has eaten deep into the fabrics of our economy. Money which would have been used for job creating investment opportunities are stolen and stashed into foreign banks by corrupt politicians. This is in line with the findings of Longe (2017) that revealed that poor governance was one of the contributory factors of graduate unemployment.

**Skill Acquisition**

Business Dictionary defines skill as an ability and capacity acquired through deliberate, systematic, and sustained effort to smoothly and adaptively carry out complex activities or job functions involving ideas (cognitive skills), things (technical skills), and/or people (interpersonal skills). Skill refers to the ability to *do* rather than underlying competence or mental representation (Vanpatten and Benati, 2010). To expound this, Cornford (1996) outlines nine separate defining attributes of "skill" and "skilled performance. These defining attributes are:

1. skill is learned;
2. skill involves motivation, purpose and goals;
3. schemas are prerequisite for skilled performance;
4. skills require content and context knowledge;
5. skills are performed and transferred in the presence of specific stimuli;
6. skills involve problem solving relevant to the context;
7. skill involves relative judgments with individual differences in skilled performance;
8. standards of excellence are important;
9. skill involves comparable replication and considerable periods of time are required to reach high levels of skill.

Skill acquisition, therefore, is the process of learning that helps one build his ability or capacity to seamlessly and effortlessly do that which he is exposed to do. Boutcher (1992)

defines skill acquisition as the process of facilitating the development of a novice into an expert. It is the ability to bring about some end results with maximum outlay of energy or time and energy (Guthere, 1982).

### **Employability of Graduates**

Employability is a *set of skills and attributes expected to be possessed by all labour market participants that ensure their effective performance at work place and all round benefit to them, their employers and the society at large* (ILO, 2007). This body sees employability as not just having the ability to get a job, but having the capacity to network and market oneself, navigate through a career and remain employable throughout life. It requires the ability to ask questions, acquire new skills, identify and evaluate options, understand rights at work including the right to a safe and healthy work environment, adapt successfully to changing situations and the courage to innovate. Employability results from several factors – a foundation of core skills, access to education, availability of training opportunities, motivation, ability and support to take advantage of opportunities for continuous learning, and recognition of acquired skills – and is critical for enabling workers to attain decent work and manage change and for enabling enterprises to adopt new technologies and enter new markets. Employability of graduates, therefore, is the ability of graduates to effectively market themselves and be able to, not only secure jobs that offer commensurate satisfaction, but deliver services that match their qualifications. Employability of graduates entails the acquisition of requisite skills that make them fit into those offices that they applied for.

Oguntuwase (2013) asserts that products of the Nigerian University system have at different fora been challenged to test their suitability or otherwise to secure few available white collar jobs. According to the author, the situation is not only sympathetic but embarrassing that the vast human material resources available to the country had not been trained and utilized to the advantage of the country. He cited Tunde Lemo, former Deputy Governor of the Central Bank of Nigeria (CBN), saying that it has become evident that very modern day Nigeria graduates are not employable as Nigerian Education system is bedeviled by myriads of problems ranging from poor funding, undue interference, poor staffing, overcrowding and management incompetence. The author further cited professor Sola Fajana as saying that the dismal performance of many graduates in the labour market was due to faulty curricular in most Nigerian universities, emphasizing that programmes run in the universities are no longer relevant, and classroom teaching mostly focuses on concepts and not marketable skills.

### **Employability Skills**

These are skills that make a graduate employable in the world of work. For ease of comprehension, ILO (2013) defines employability skills as ...the skills, knowledge and competencies that enhance a worker's ability to secure and retain a job, progress at work and cope with change, secure another job if he/she so wishes or has been laid off and enter more easily into the labour market at different periods of the life cycle. Individuals are most employable when they have broad-based education and training, basic and portable high-level skills, including teamwork, problem solving, information and communications technology (ICT) and communication and language skills. This combination of skills enables them to adapt to changes in the world of work.

ILO (2013) outlines the following employability skills:

- 1) **Basic/Foundation Skills:** At their most elemental, foundation skills include the literacy and numeracy skills necessary for getting work that can pay enough to meet daily needs. These skills are also a prerequisite for continuing in education and training, and for acquiring transferable and technical and vocational skills that enhance the prospect of getting good jobs
- 2) **Vocational or technical:** Specialized skills, knowledge or know how needed to perform specific duties or tasks.
- 3) **Professional/personal:** Individual attributes that impact on work habits such as honesty, integrity, work ethics.
- 4) **Core work skills:** The ability to learn and adapt; read, write and compute competently; listen and communicate effectively; think creatively; solve problems independently; manage oneself at work; interact with co-workers; work in teams or groups; handle basic technology, lead effectively as well as follow supervision.

Personal attributes that contribute to overall employability are loyalty, sense of humour, ability to deal with pressure, personal presentation, honesty and integrity, adaptability, balanced attitude to work and home life, positive self esteem, reliability, motivation, commitment, common sense and enthusiasm.

**What skills do employers want?** Having observed the skill gap in Nigeria labour market, employers most times outsource recruitment task to consultants who rigorously examine potential graduate employees to look out for those who possess these employable skills needed to optimize their resources. Skills You Need (2013) outline the following skills often demanded by employers of labour:

- (a) **Interpersonal skills.** Used to interact with people, participate effectively as members of a team, negotiate, satisfy customers, make decisions, manage time and work effectively with colleagues.
- (b) **Communication Skills.** These include verbal and writing skills. It includes the ability to write clearly and succinctly, demonstrate good vocabulary and active listening ability.
- (c) **Critical thinking Skills.** Ability to solve problems and make decisions is a huge asset to employers. This also includes ability to effectively plan and organize events, having creative thinking ability and being innovative and inventive (devising new ways of doing things that add value to the work environment).
- (d) **Personal Development.** Having the right attitude to work and the organization you work for. Employers look for people who are open to learning and embrace change. Such a person will be more successful than the person who is afraid of learning and resistant to changes in the organization.
- (e) **Self-management skills.** These skills include self-motivation, self-confidence, self-control-skills that are used to manage personal feelings and how people react to challenges and problems both at work and in their private lives.
- (f) **Presentation Skill.** These are skills needed for presenting information clearly and effectively in the work place. This includes business plans, reports, minutes, etc.
- (g) **Leadership Skill.** Ability to influence others towards the achievement of a goal.
- (h) **Numeracy.** Involves understanding of numerical data, statistics and graphs. It is also a part of making decisions and reasoning.
- (i) **IT Skills.** Acquiring basic IT skills and being familiar with the computer opens a wide range of employment opportunities and increases marketability in workplaces.

### **Employee/ Employer Skill Gap**

This is the gap between the skills an employer expects a potential employee to possess and what he actually possesses. Past research works as earlier cited have shown that graduate employees fall short of employers' expectations in terms of employable skills.

## **2.2 Empirical Review**

Sodipo (2010) conducted a survey on the level of competency of tertiary education graduates employed in Ogun State Civil Service between 2004 and 2006. Findings of the research work revealed that out of 74 Directors of Administration in the Ministries, Departments and Agencies that responded to the questionnaire administered: 50% of the respondents agreed that the level of competency is poor; 33.3% of the respondents agreed that they do not possess the necessary skills required on the job; all the respondents disagreed that the graduates' knowledge in their areas of specialization is outdated; 40% of them agreed that the graduates are not resourceful enough; 40% of them agreed that their command of English is poor; 33.3% of them agreed that they are not able to operate the equipment they are to work with, without retraining them; 90% of the respondents agreed that for the graduates to satisfy the requirement of the employers' establishments, they would need to be retrained in areas which include Effective Communication, ICT training, e.g. AutoCAD, data processing and maintenance, Geographic Information System, work ethics, professional ethics, practical aspect of the job, Management and Citizenship training; 20% of them rated them good on ICT skill; 30% rated them good in numeracy or computation skills, organizational skills, and interpersonal skills.

Sodipo (2010) also reported a survey carried out by AGDC on youth Employability in 2010, in which 91 Human Resources Managers and personnel from a selected network of companies participated in. Findings revealed that: 48% of employers rated young graduates 'poor' in conceptual and creative thinking; 44% of employers rated young graduates 'poor' in self-awareness; 39.6% of employers rated young graduates 'poor' in time management; 36% of employers rated young graduates poor in global and commercial awareness; 34.1% of employers rated young graduates poor in sense of career direction; 34.1% of employers rated young graduates poor in emotional intelligence; 31.9% of employers rated young graduates poor in managing school to work transition.

Edinyang, Odey and Dimba (2015) conducted a study on the influence of academic factors on graduate employability in Nigeria. This study was done in Calabar, Cross River State using accidental sampling technique and a sample size of 150 respondents. Pearson product moment correlation coefficient, SpearmanBrown prophesy formular and ANOVA were used for the statistical analysis. Findings revealed that academic discipline significantly influences graduate employability.

Ekong and Ekong (2016) investigated how unemployment problem is tackled through skills acquisition by the National Directorate of Employment in Akwa Ibom State, Nigeria. The major data collection instrument used was questionnaire, which was administered on a sample size of 141 respondents drawn from 3 technical/vocational skill acquisition centres located in Asuna, Etinan Local Government Area. The result of the trend analysis conducted revealed a positive link between skills acquisition by NDE and unemployment reduction in Akwa Ibom.

Longe (2017) explored the phenomenon of graduate unemployment as well as its



causal factors, consequences and remedies in Nigeria. Using quantitative research method, data were collected from 360 Abuja based professionals through a self-administered questionnaire structured in Likert scale format. The respondents were selected using purposive sampling technique and data were analyzed using descriptive statistics of frequency counts and percentages, mean and standard deviation and Kurtosis. The study identified a combination of causal factors as responsible for the aggravated case of graduate unemployment in Nigeria. Furthermore, findings showed that there was no effective collaboration between universities and labour employers in providing relevant skills required for employability and employment fulfillment of university graduates.

### **3. METHODOLOGY**

Descriptive research design was used much as primary data were the major source of data collection for this study. The primary data were sourced with the aid of structured questionnaire consisting of a five point Likert scale comprising twenty four (24) statements used in assessing the employability of graduates. Copies of the questionnaire were administered on three hundred and thirty-four (334) graduates spread over the three senatorial zones of Abia State using convenience sampling. This sample size was determined using Cochran formular as the percentage of the unemployed,  $p$  and percentage of the employed,  $q$ , in Abia State are ascertained as published by the National Bureau of Statistics. Hence, the sample size,  $n$  is obtained as  $n = (Z^2 pq) / e^2 = (1.96^2)(0.316)(0.684) / 0.05^2 \approx 334$ . The statistical analysis was done using simple percentages, discriminant analysis and correlation analysis as aided by SPSS Version 25.

## **4.0 DATA PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS**

### **4.1 DATA PRESENTATION**

The frequency distributions of the bio-data are presented below.

Characteristic	Category	Frequency	Percentage (%)
Gender	1. Male	221	62.2
	2. Female	113	33.8
Age Group	1. 20 - 29	251	75.1
	2. 30 - 39	60	18.0
	3. 40 - 49	23	6.9
Marital Status	1. Single	277	82.9
	2. Married	57	17.1
Highest Educational Qualification	1. HND	256	76.6
	2. B.Ed	17	5.1
	3. B,Sc	43	12.9
	4. M.Sc	18	5.4
Employment Status	1. Unemployed		
	2. Employed		

Source: Field Survey (2019)



Table 4.1 above shows that 221 respondents representing 66.2% of the respondents are males, while 113 representing 33.8% of the respondents are females. 75.1% of the respondents are between 20 and 29 years, 18.0% of the respondents are between 30 and 39 years, while 6.9% of the respondents are between 40 and 49 years. This indicates that a higher percentage of the respondents are young graduates. The table also reveals that 82.9% of the respondents are single while 17.1% are married. In view of the highest qualifications of respondents, 76.6% of the respondents are HND graduates, 5.1% are B.Ed holders and 12.9% are B.Sc. holders and the remaining 5.4% have Masters Degrees. That is, 94.6% of the respondents are first degree holders. The table also reveals that 74.0% of the respondents are unemployed and 26.0% are employed.

**Table 4.2: Descriptive Statistics of Responses of the Likert-Scale questions**

SN	Statements	SD	%	D	%	U	%	A	%	SA	%	Mean	SD
1	Many vocational skill courses are offered by undergraduates.	170	50.9	115	34.4	30	9.0	12	3.6	7	2.1	1.72	0.923
2	Vocational skill courses offered by undergraduates are well taught.	58	17.4	54	16.2	124	37.1	51	15.3	47	14.1	2.93	1.253
3	Students pass vocational skill courses they offer with good grades	37	11.1	37	11.1	95	28.4	97	29.0	68	20.4	3.37	1.237
4	Graduates communicate in English language fluently.	7	2.1	3	0.9	20	6.0	123	36.8	181	54.2	4.40	0.817
5	At the point of graduation, students read independently and negotiate responsively.	3	0.9	13	3.9	0	0.0	114	34.1	204	61.1	4.55	0.616
6	Graduates can network and share information.	7	2.1	12	3.6	95	28.4	119	35.6	101	30.2	3.88	0.953
7	Working across different ages, gender, races, religions or political divides is not a problem to graduates.	6	1.8	18	5.4	36	10.8	167	50.0	107	32.0	4.05	0.897
8	Graduates can work independently and as a member of a team.	4	1.2	50	15.0	0	0.0	120	35.9	160	47.9	4.29	0.808
9	Coaching, mentoring team skills and giving feedback are acquired by undergraduates.	12	3.6	19	5.7	85	25.4	135	40.4	83	24.9	3.77	1.003
10	Graduates have creative and innovative skills to solve problems.	9	2.7	15	4.5	50	15.0	160	47.9	100	29.9	3.98	0.935
11	Graduates can independently initiate, identify and solve problems.	3	0.9	7	2.1	87	26.0	130	38.9	107	32.0	3.99	0.865
12	Graduates could use the knowledge acquired in mathematical courses to solve problems.	12	3.6	25	7.5	93	27.8	115	34.4	89	26.6	3.73	1.048
13	Graduates have personal vision and goals.	11	3.3	6	1.8	27	8.1	131	39.2	159	47.6	4.26	0.927
14	Graduates can evaluate and monitor their own performances.	9	2.7	34	10.2	0	0.0	146	43.7	145	43.4	4.28	0.754

15	Graduates have knowledge and confidence in their own ideas and visions and can take responsibility of their actions.	6	1.8	22	6.6	0	0.0	138	41.3	168	50.3	4.40	0.694
16	Graduates can manage time, properties and resources – setting time line, coordinating tasks for themselves and with others.	3	0.9	15	4.5	49	14.7	148	44.3	119	35.6	4.09	0.870
17	Weighing up risk, evaluating alternatives and applying evaluation criteria are no more problems to graduates.	7	2.1	16	4.8	102	30.5	136	40.7	73	21.9	3.75	0.920
18	Graduates can collect, analyze and organize information of business systems and their relationships.	19	5.7	13	3.9	73	21.9	121	36.2	108	32.3	3.86	1.092
19	Graduates have a range of IT Skills and can use computers to organize and analyze data.	7	2.1	19	5.7	85	25.4	89	26.6	134	40.1	3.97	1.036
20	Graduates are willing and eager to learn new Computer/IT skills.	11	3.3	9	2.7	34	10.2	125	37.4	155	46.4	4.21	0.964
21	Graduates have the physical capacity (manual dexterity) to apply technology.	9	2.7	9	2.7	57	17.1	144	43.1	115	34.4	4.04	0.931
22	Graduates can contribute to the learning community.	9	2.7	56	16.8	0	0.0	137	41.0	132	39.5	4.17	0.802
23	Graduates can apply learning to 'people, goods and services issues'.	12	3.6	52	15.6	0	0.0	129	38.6	141	42.2	4.19	0.828
24	Graduates are open to new ideas and techniques as to accommodate change.	6	1.8	13	3.9	16	4.8	130	39.9	169	50.3	4.33	0.876

Source: Field Survey, 2019.

Table 4.2 shows the percentage analysis and descriptive Statistics of Responses of the Likert-Scale questions. The mean values of 1.72 for “many vocational skill courses are offered by undergraduates” which is quite less than the mean score of 3.0 indicates that many vocational skill courses are not taught to undergraduates in Nigerian tertiary institutions. In addition to that, the mean value of 2.93 does not show that vocational skill courses offered by undergraduates are well taught since it is not up to the average mean of 3.0. But a mean score of 3.37 which is above the average score of 3.0 indicates that students pass vocational skill courses they offer with good grades despite the finding that they are not well taught. This also implies that grades could be influenced by factors not disclosed by this study. The other questions which bother on the employability skills required by employers of labour, each has a mean score significantly above the mean score of 3.0, indicating that graduates are quite aware of these skills that employers of labour are looking for and seem to acquire these skills in preparation for employment. This also implies that other factors may have contributed to the soaring graduate unemployment rate in Nigeria.

## 4.2 ANALYSIS AND TEST OF HYPOTHESES

### Discriminant Analysis for Hypothesis 1

Hypothesis 1 stated in the null as  $H_{01}$ : Nigerian graduates acquisition of basic employable skills does not significantly determine their employment status is tested using discriminant analysis. The variables for the discriminant analysis are as outlined below:

$Y_1$  = Employment status (Unemployed, Employed) = Q5

$X_1$  = Communication Skills = Q9 + Q10 + Q11

$X_2$  = Inter-Personal Relationship Skills = Q12 + Q13 + Q14

$X_3$  = Problem Solving Skills = Q15 + Q16 + Q17

$X_4$  = Self - Management Skills = Q18 + Q19 + Q20

$X_5$  = Planning and Organizing Skills = Q21 + Q22 + Q23

$X_6$  = Technological Skills = Q24 + Q25 + Q26

$X_7$  = Life-long learning Skills = Q27 + Q28 + Q29

and the results of the discriminant analysis are shown in Tables 4.7, 4.8 and 4.9 below

**Table 4.3: Eigenvalues, % of Variance and Canonical Correlation**

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	0.028	100.0	100.0	0.166

Source: Field Survey, 2019.

Results of Table 4.3 shows that the eigenvalue associated with the discriminant function is 0.028 and it accounts for 100% of the explained variance with a canonical correlation of 0.166. The square of it ( $0.166^2$ ) is equal to 0.028, That is, only 2.8 percent of the employability of graduates in Nigeria can be accounted for by these employable skills internationally recognized.

**Table 4.4 Wilks' Lambda Test of Function**

Test of Function(s)	Wilks' Lambda	Chi-square	df	P-value
1	0.973	9.073	6	0.170

Source: Field Survey, 2019.

Table 4.4 shows the test of the discriminant function. As the associated p-value = 0.170 is less than 0.05, we do not reject the null hypothesis one. Hence, we accept the null hypothesis one, which states that Nigerian graduates acquisition of basic employable skills does not significantly determine their employability status.

**Table 4.5 Classification Results of Cross-validation**

Predicted Group Membership			
Employment status	Unemployed	Employed	Total
Unemployed	121(49.0%)	126 (51.0%)	247
Employed	49 (56.3%)	38 (43.7%)	87

Source: Field Survey, 2019.

The summary of the classification result of the cross-validation is shown in Table 4.5 which shows that the discriminant function correctly classified 47.6% of respondents. Since we expect ratio of 0.50 = 50%, the validity of the discriminant function is judged unsatisfactory as it will not discriminate (classify) the unemployed and the employed graduate satisfactorily.

### **Correlation analysis for hypothesis 2**

Hypothesis 2 stated in the null as  $H_{02}$ : There is no significant relationship between acquisition of employability skills by Nigerian graduates and their exposure to vocational skills in schools is tested using the correlation analysis. The variables for the correlation analysis are outlined below:

$Y_2$  = Exposure to Vocational skills in schools = Q6 + Q7 + Q9

$X_1$  = Communication Skills = Q9 + Q10 + Q11

$X_2$  = Inter-Personal Relationship Skills = Q12 + Q13 + Q14

$X_3$  = Problem Solving Skills = Q15 + Q16 + Q17

$X_4$  = Self - Management Skills = Q18 + Q19 + Q20

$X_5$  = Planning and Organizing Skills = Q21 + Q22 + Q23

$X_6$  = Technological Skills = Q24 + Q25 + Q26

$X_7$  = Life-long learning Skills = Q27 + Q28 + Q29

**Table 4.6. Correlation Analysis**

Variables	n	$R$	$R^2$	P-value	Decision
Graduates acquisition of employability skills	334	0.390	0.152	0.000	Reject
Exposure to Vocational skills in schools	334				

The result of table 4.6 shows that there is a significant relationship between acquisition of employability skills by Nigerian graduates and their exposure to vocational skills in schools as the p-value is significantly less than 0.05. This result is also confirmed by the correlation analysis which shows a multiple correlation coefficient,  $R$ , of 0.390 and coefficient of determination  $R^2$  of 0.152 = 15.2% as its p-value is 0.000 and this leads to the rejection of the null hypothesis 2. The result of this hypothesis reinforces the assertion that both vocational and employability skills are relevant in our contemporary society. Little wonder Abiodu (2010) affirms that employers of labour force are not only interested in those having higher education, but also practical skills appropriate for job fulfillment.

### **4.3 SUMMARY OF FINDINGS**

The following findings are made in this study:

1. Many vocational skill courses are not taught to undergraduates in tertiary institutions and the few taught are not well taught.
2. Graduates passed the few vocational courses taught with good grades, despite the fact that they were not well taught.
3. Nigerian graduates acquisition of basic employable skills does not significantly determine their employability status. Other factors must have played out as captured by (Longe, 2017, Uddin and Uddin, 2013, Ayinde, 2008).

4. There is a significant relationship between acquisition of employability skills by Nigerian graduates and their exposure to vocational skills in schools.

## **5 CONCLUSION**

There is an alarming increase in the rate of unemployment among Nigerian graduates. This is not necessarily as a result of non-possession of employable skills as averred by some researchers. Many factors may have culminated into that, of which the speed at which these graduates are churned, use of old curricular which do not create ample opportunities for undergraduates to be fully trained in the areas of skill acquisition to make them self reliant as they graduate, poor governance, among others may have contributed to it, hence, the need to conduct further studies to further verify these causative factors.

## **6 RECOMMENDATIONS**

From the findings of this work, the following recommendations are made:

- 1 Many vocational skills should be taught and well taught to students in tertiary institutions to empower them to be self sufficient and ultimately reduce unemployment rate in the country.
- 2 Employment opportunities should be created by governments at all levels to reduce this alarming rate of unemployment in the country.
- 3 Employment process should be free, fair and credible, giving opportunities to those who can prove their mettle to occupy advertised positions. Nepotism encourages mediocrity and should be abhorred at all times.

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# Achieving Sustainable Development through Audit Committee Impact on Earnings Management: Evidence from Nigerian Firms

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**Abstract:** This study investigated the relationship between audit committee composition and earnings management in a developing country, Nigeria.

Content analysis of annual reports of thirty (30) listed companies on the Nigerian Stock Exchange (NSE) over a three (3) year period was carried out using both the descriptive and inferential statistics. The finding clearly revealed that opportunistic behavior of management is mitigated when an effective and properly structured audit committee is put in place. An audit committee with financial expertise serves as an independent supervision on the management in the use of accrual accounting on income adjustment. It is therefore recommended that financial expertise should be a pre-requisite for membership into audit committee and the relevant section (S359(4)) of the Companies and Allied Matters Act 1990 should be amended to reflect this.

**Key words:** Audit Committee, Accrual Accounting, Earnings Management.

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A Special Issue Conference Proceeding Paper

## Introduction

The generally accepted indicator of the profitability of an enterprise is the earnings often presented in the financial statements as “net profits”. The use of accrual basis of accounting in the preparation of financial statements allows management a measure of discretion in the determination of accrual components of revenue and expenditure. The effect of this, according to Chandrasegaram R, et al (2013) has resulted in company's performance giving a rosy picture different from the underlying financial health. Rauf et al (2012) in his study indicated that earnings management practices with the intention to manage user's perceptions in firms are considered unethical even though no accounting standards are violated.

The motivation and opportunity to engage in earnings management however could

be minimized if effective audit committee is put in place while the board on the other hand efficiently executes its oversight functions.

### **1.1 Statement of the problem**

The separation of ownership and management in public companies places the management at privileged positions which could be used to achieve personal objectives at the detriment of the owners. More often than not, management through opportunistic behaviours enhances companies value which differ from the underlying financial status of the enterprises. This has resulted in the liquidation of some giant corporations in the time past. The collapse of once prestigious corporations such as Enron, world. Com has been attributed to the incidence of earnings management and poor corporate governance structure.

Earnings management Erodes the credibility of the financial reporting process by presenting a rosy financial position different from the underlying financial health of an organization. The collapse of these giant corporations triggered the need for regulatory authorities' world over to begin to lay emphasis on audit committee issues as well as the structure of the board of directors.

The absence of a properly constituted audit committee, meeting frequently to oversee the financial reporting process of the management creates an enabling environment for earnings management (sallh, Haat:2004).

Previous studies have shown that earnings management is more pronounced in firms where the audit committee members lack the necessary financial expertise to fulfill their responsibility of monitoring the internal control of the firm as well as overseeing the firms financial reporting process.

### **1.2 Study Objective**

The broad objective of this study is to examine the impact of audit committee on earnings management

To achieve this, the following specific objectives are set;

1. To examine the extent to which frequent audit committee meetings influence earnings management.
2. To examine the extent to which audit committee financial expertise influences earnings management
3. To ascertain the effect of board structure on earnings management.

## **Literature Review**

A review of the existing literature on audit committee, board structure and earnings management is presented with the aim of providing an in-depth understanding of the study. The review covers articles published in leading academic journals, related text books, periodicals and other published researches.

### **2.1 Conceptual Review**

Bala and Kumal (2015) described earnings management as a deliberate misrepresentation of the financial condition of an enterprise accomplished through intentional misstatement or omission of amounts or disclosure in the financial statement to deceive financial statement users. More often than not, earnings management is accomplished through discretionary accruals. The nature of accrual accounting gives managers a significant amount of discretion in determining the actual earnings a firm reports in any given period (Epps and Ismail, 2008).

Hassan and Ahmed (2012) documented that accruals are the most important earnings management instrument used by managers to either increase or decrease reported income. This is because there are components of earnings not reflected in current cash flows and a great deal of managerial discretion goes into their construction.

Earnings management practices are viewed as unethical even though no accounting standards are violated. Dechow and Skinner (2000) note that the border between earnings management and accrual accounting has become ambiguous. Earnings management may take the form of either income – increasing or income – decreasing accounting choices. Income-increasing manipulation means positive discretionary accruals (Yang, Chun, and Ramadili, 2009).

Effective audit committee and independent board structure are mechanisms that could be used by enterprises to check the use of earnings management in manipulating reported earnings. Audit committees are established to oversee company's accounting and financial reporting policies and practices with the aim of protecting the interest of shareholders. Several countries of the world have put in place various codes on corporate governance which provide guidelines on the formation of audit committees particularly with respect to size, independence, frequency of meetings and financial literacy of members to ensure good practices. In Nigeria, the Companies and Allied Matters Act 1990 (S359(4)) stipulates that the audit committee shall consist of an equal number of directors and representatives of the shareholders of the company (subject to maximum number of six members) and shall examine the auditor's report and make recommendation thereon to the annual general meeting as it may think fit: provided however, that such member of the audit committee shall not be entitled to remuneration and shall be subject to re election annually.

The board of an enterprise ensures that the interest of shareholders and that of the managers are aligned. Klein (2002) in his work highlighted that board independence and competency are effective mechanisms in monitoring the management. Board structure refers to the proportion of non-executive directors manifest a distinct, characteristic form a board where the reverse is the case. Yang, Chun and Ramadili (2009) opine that independent non - executive directors provide independent judgment to the board as well as providing a check-and-balance to the activities of the executive directors. Earnings management is less likely to occur in companies whose board has more independent directors (Beatriz, 2008).

## **2.2 Empirical / Academic Review**

Bola and Kumai (2015) in their study captioned "Board characteristics and Earnings Management of listed Food and Beverages Firms in Nigeria" examined the impact of board size, board composition, board meetings and board financial expertise on earnings management. The study was prompted by the need to look up for indicators of earnings reliability after the global financial crises in 2008. The study covered a period of six years from 2009 to 2014. Data for the study were extracted from firm's annual reports and accounts. The ordinary least square regression was employed in testing the model of the study. The results of the analysis revealed an inverse relationship between board size, board meetings, board financial expertise and earnings management while board composition is positively and significantly related to earnings management of listed food and beverages firms studied. In line with the findings, the study recommended among others that listed food and beverages firms in Nigeria should have as much directors as

possible in order to reduce earnings manipulation and that the regulators such as Securities Exchange Commission (SEC) should increase the minimum number of members with financial expertise on the board and also they should have a statutory position on the maximum number of board meetings as SEC Code of Corporate Governance is silent on this. Salleh and Haat (2014) studied Audit Committee and Earnings Management: Pre and Post Malaysian Code of Corporate Governance (MCCG). The study examined the effectiveness of audit committee in constraining earnings management after the revised MCCG among listed firms in Malaysia. The study was informed by the need to ascertain the effectiveness of audit committee characteristics in mitigating earnings management between the pre and post revised MCCG periods. The sample for the study was drawn from 280 companies listed on Bursa Malaysia for a five year period of 2005 to 2009. The discretionary accrual was estimated using the Modified Jones Model (1995) which was used to proxy for earnings management.

The finding of the study showed that audit committees play an important and effective role in reducing earnings management after the revision of MCCG. Furthermore, audit committee size and audit committee that has meetings with external auditors without the presence of executive directors at least twice a year showed a significant association with earnings management. The study therefore concluded by indicating, that the MCCG has achieved its aim in improving the quality of audit committees.

Chandrasegram et al (2013) appraised the impact of audit committee characteristics on earnings management in Malaysian Public Listed companies. The negative impact of earnings management on Companies formed the crux of the study. According to the study, companies often portray a positive outlook of their business in order to provide confidence to shareholders and investors regarding the profitability and viability of the company and a key method used by the management to manage earnings and show better performance is through accrual accounting. This method of earnings management is not legally prohibited and is based mainly on the company's choice of accounting policies. The study utilized secondary sources of data derived from annual reports of year 2011 of 153 Malaysian public listed companies to ascertain the impact of audit committee characteristics, namely frequency of audit committee meetings, size and independence of the audit committee on earnings management. The study revealed that these audit committee characteristics are not negatively related to the magnitude of earnings management.

Reuf et al (2012) examined the impact of company and board characteristics on earnings management. The study observed that companies with poor performance tend to alter financial reports through the use of accruals to increase earnings thereby misleading some stakeholders about the underlying economic performance of the company. Data for the study were obtained from content analysis of annual reports of 214 listed companies for the year 2008. The study revealed that firm size has a positive significant relationship with earnings management while board size has no influence on the practice of earnings management. The researchers used board size in their study and finally recommended that future researchers could incorporate other board characteristics such as number of board meetings, competency etc in their study.

### **2.3 Theoretical Framework**

Earnings management occurs because the interest of the managers vary from that of the shareholders. Bola & Kumai (2015) highlighted that managers can be influenced by some factors such as financial rewards, labour market opportunities and relationship with other



parties that are not directly relevant to the interest of the shareholders. The shareholders in public enterprises engage agents to manage their enterprises and report back to them on the financial position of the firms at stipulated intervals. The agents, to continue to win the confidence of the shareholders more often than not engage in earnings management or income smoothening just to satisfy the owners that the firms under their control have been managed in their best interest. Agency theory provides a logical prediction of the attitudes of the agents and principals when placed in such a relationship while also proposing a series of mechanisms that seek to reconcile the interest of both parties. Hence the adoption of this theory as the underlying theoretical frame work.

Agency theory has emerged as a dominant model in financial literatures. It became popular in the early 1970's. This theory explains the relationship existing between the principals such as shareholders and agents such as company executive and seeks to address the problems which arise when the principal delegates decision making authority or hires another person to perform some services on his behalf. The two major issues addressed by this theory are:

1. Goal congruence: A problem usually arises when the interest or goals of the principal differ from that of the agent. Agency theory proposes various mechanisms that could be used to align the interests of the principals and the agents. One of such mechanisms is through the establishment of the board of directors, appointed through election in the annual general meeting, to safeguard the interests of the shareholders (Rauf, et al 2012). Other mechanisms include monitoring by non – executive directors monitoring by institutional shareholders, auditors and the incentive effects of executive share ownership (Bukit and Iskander, 2009).
2. Attitude to Risk: This problem arises when both the principal and agent have different attitude towards risks.

This theory therefore emphasizes that the goals and risk tolerance of both the principal and agent should not be in conflict. In order to synchronize the interest of both the principal and agents, expenses are incurred to sustain an effective agency relationship. Such expenses include offering management performance bonuses to encourage managers to act in the interest of the shareholders etc.

## **Discussion**

Discussion in this regard focuses on strategies that could result in the accomplishment of the stated objectives, gap identification in the literatures reviewed as well as the suitability, strengths and limitations of the theoretical framework.

### **3.1 Discussion of strategies**

This study focused on the impact of audit committee and board structure on earnings management. To achieve the stated objective, this research set out to examine the extent to which the following variables namely:

- Frequent audit committee meetings
- Audit committee financial expertise and
- Board structure, impact of earnings management.

Frequent audit committee meetings as a control variable is determined by the number of meetings held by the committee during the year while audit committee financial expertise is measured by the proportion of audit committee members with financial knowledge to

the total number of audit committee members.

Board structure is measured by the ratio of independent / non – executive directors to total board size. Some of the methods used to test for earnings management include the assessment of accounting policy changes and discretionary accruals. This study focuses on the discretionary accrual method developed by Jones (1991) and later modified by Dechow Sloan and Sweeney (1995). This model divided accrual (Total Accrual TAC) into two namely; discretionary and nondiscretionary components Discretionary accruals are the managerial interventions or subjective accounting choice made by managers. Discretionary accruals in the Modified Jones Model are primarily present in current items ( e.g account receivables) rather than non – current items ( e.g depreciation) Yang; Chun and Ramadily, 2009) Hence, the use of discretionary current accruals as a proxy for earnings management in this study.

$$DCA_{it} = \frac{CA_{it}}{TA_{t,t-1}} - NDCA_{it}$$

Where  $DCA_{it}$  = Discretionary current Accruals for firm I in year t  
 $CA_{it}$  = Current Accruals  
 $TA_{j,t-1}$  = Total Assets  
 $NDCA_{it}$  = Non-discretionary Current Accruals

### 3.2 Discussion on the Stated Theoretical Framework

The suitability of the agency theory used in this study as the underlying theoretical framework stems from the fact that this theory seeks to align the interest of the management with that of the shareholders by proposing a series of mechanism to reconcile reconcile the interest of both parties. A key mechanisms used by organizations in checking checking the opportunistic behavior of agents is the constitution of an independent board board of directors to safeguard the interest of the shareholders. Corporate governance governance framework has taken a step further by stipulating he formation of audit committees for better monitoring. Additional instrument of minimizing the conflict of of interest arising from shareholders and managers is the use of the incentive effects of of executive share ownership.

Empirical studies that support the mitigation of earnings management by organizations that adopted this theory in reconciling the interest of both the principal and agents can be found in many prior studies and this has remained the strength of this theory. Earnings management is less likely to occur in companies whose board has more independent directors, and audit committee members with financial expertise, meeting frequently ( Yang, Chun and Ramadili, 2009; Selleh Haat, 2014).

The weakness of this theory usually manifests when performance bonus or executive compensation is adopted as a key measure in aligning the interest of the principal and agent as suggested by the theory. This strategy could encourage the management to engage in income increasing manipulations rather than serving as a deterrent.

### **3.3 Discussion on the Gaps Present in the Reviewed Literature**

Bala and Kumai (2015) empirically researched on Board characteristics and Earnings management of listed Food and Beverages Firms in Nigeria. Board attributes such as board size, board composition, board meetings and board financial expertise were used as variables impacting on earning management. The first gap observed in their research is on the use of board size as earnings management variable. It is argued in this study, that regardless of the size of a board, once the composition of the board is not structured in favour of independent non – executive directors, collusion among the directors to engage in earnings management cannot be ruled out. Hence the use of board structure in this present study.

Board financial expertise not reflected in the composition of the audit committee would not have any visible impact on earnings management. This is another gap observed in the work of Bala and Kumai (2015). This indept financial reporting oversight function of the board has been delegated to the audit committee members. Hence, the committee's financial expertise should serve as a better variable impacting on earnings management.

Chandrasegram et al (2013) examined the impact of audit committee characteristics such as audit committee size, audit committee independence and frequency of audit committee meetings on earnings management. It is argued that earnings management could still continue undetected in enterprises having large audit committee size and audit committee independent of the management but lacking in financial expertise. The use of discretionary accrual for income smoothening is a technical issue in accounting and requires audit committee members with financial knowledge and expertise to understand and address this legal but unethical practice. This gap overcome by introducing audit committee financial expertise as a variable impacting on earnings management.

### **Conclusion**

This study examines the need for achieving sustainable development through audit committee impact on earnings management: evidence from Nigerian firms. The use of accrual accounting gives the management some flexibility in adjusting earnings (profit) towards their desired level. The findings of this study show that this opportunistic behavior of the management is mitigated when an effective audit committee regularly meeting and having adequate number of members with financial expertise is put in place. It is also revealed that an efficient board with more independent and non executive members impacts significantly on such opportunistic tendencies of the management.

### **Recommendation**

It is recommended in the Nigerian context that for audit committee to be effective in their oversight function, financial expertise of those to be appointed into membership of the committee must be a pre – requisite. Furthermore, board composition should be structured to tilt in favour of independent and non – executive directors.

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**QUOTATION FOR REPOURING OF 500 KVN TRANSFORMER.**

1. Transport to and fro 20,000	-	40,000
2. 3 ½ drums of oil 110,000	-	385,000
		180,000
3. 120 Lb of coils 1500	-	204,000
4. 10 yard of insulation paper 700	-	7,000
5. 1 tone of Shallack - 5000	-	5,000
Total		617,000
Labour		50,000
Grand total		<u>667,000</u>

Thanks.

Yours faithfully,

**AHAMEFULA OBIALOR**  
**MANAGING DIRECTOR.**

## E-Governance in the Public Sector in Nigeria

**AMARA, Tobias Chukwukerue**

**Abstract:** *E-governance phenomenon has taken root in the western world and the organized private sector in Nigeria but the same cannot be said about the public sector, especially at the state and local government levels. E-governance practice is premised on the benefits of reduced corruption, increased transparency, convenience and revenue growth. The paper examines the phenomenon of E-governance from the public sector perspective taking Abia State Polytechnic Aba as analytical framework. It highlights the objectives of E-governance and its cardinal principles of providing SMARTT governance vis-à-vis its stages of application in Public service in Abia state. Ten ways were identified through which e-governance can improve the practice of public administration with emphases on reduction of corruption, increased transparency, greater convenience and revenue growth as measurement indices. Using a simple percent technique to analyze data collected from twenty four (24) persons on a four-point Likert scale it concludes that the paradigm shift from traditional governance to e-governance faces some hiccups in Nigeria with the result that while e-governance has significantly enhanced convenience and transparency it does not have a significant positive effect on reduction of corruption and the growth of revenue.*

**Key words:** *E-Governance, E – Government, Public Sector*

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### INTRODUCTION

Ordinarily administration sets in when two or more persons come together to pursue a goal in a wider scope. Administration refers to the activities of legitimately empowered persons in formulation and implementation of policies and programmes. Keohane and Nye (2000) define governance as “processes and institutions, both formal and informal that guide and restrain the collective activities of a group”. Governance involves essentially person-to-person interactions and as such is open to delay, corruption and increased cost in delivery of services. Perhaps in a bid to address these set-backs, the idea of government using information technology to facilitate government operations was muted. Hence the paradigm shift from traditional governance to e-governance.

E-governance is web-based orthodox form of governance which involves the use of



information and communication technology (ICT) at various levels of government including public and private sectors in enhancing governance. E-governance has taken roots in western world and largely in organized private sector in Nigeria especially the banking sector, but the same cannot be said about the public sector. It is against this backdrop that this study examines the concept of e-governance in Abia State Polytechnic Aba with a view to ascertaining to what extent e-governance has been instituted in the institution and to what extent it has improved public administration practice especially from the perspectives of reduction of corruption, increased transparency, greater convenience and revenue growth.

The study is presented in five sections; first is the ongoing section which is introductory, next is definitions and review of literature. The third section discusses the methodology while the subsequent sections centre on reports and finally conclusions.

## **2.0 DEFINITIONS AND REVIEW OF LITERATURE**

E-governance and e-government are often assumed to be synonymous but this is misleading. Again, many assume e-government is solely about delivering government service over the internet but it is more than that. In what follows attempt is made to clear the ambiguity by giving a few definitions which are hoped to put the concepts in the proper perspective.

### **2.1 Definitions**

#### **2.1.1 e-government**

Simply put, e-government is the use of information and communication technology, such as the internet, in the delivery of information and service to the citizens, businesses and other agencies of government. It is generic term for web-based services from agencies of government. The Global Business Dialogue on Electronic Commerce (GBDe) defines e-government as, “a situation in which administrative, legislative and judicial agencies, digitize their operations and utilize networked system to realize better quality in the provision of public services”(www.bdge.org). The working group on e-government in this developing world sees e-government as, “the use of information and communication technologies (ICTs) to promote more efficient and effective government, facilitate more accessible government services, allow greater public access to information, and make government more accountable to citizens” (www.pacificcouncil.org).

#### **2.1.2 e-governance**

Governance connotes the processes and institutions that guide and restrain collective activities of a group. Government is a subject of governance that acts with authority to create formal obligations. Accordingly e-governance means the use of ICT in the day to day activities of government. Ayo (2014:76) defines e-governance as, “the governing of a state/country using ICT”. Ojo (2004:79) sees e-governance as “the application of ICT by the government to enhance accountability, create awareness and ensure transparency in the management of governmental businesses”. According to UNESCO, “e-governance is the public sector’s use of ICT with the aim of improving information and service delivery, encouraging citizens participation in the decision making process and making government more accountable, transparent and effective” (www.unesco.org). The definitions suggest

that e-governance concerns internally-focused utilization of information and internet technologies to manage organizational resources both for public and private sectors. Our interest in this work is however limited to the public sector.

### **2.1.3 Public Sector**

The public sector generally refers to the totality of agencies that carry out public service. Ezeani (2006), Adamolekun (2002:17-18) define public service as “the totality of services that are organized under government authority”. Agba. Ochimana and Abubakar (2013:113) sees public service as, “the activities of government employees and institutions aimed at formulating and implementing governmental policies and programmes for the interest of the public”. To Akpan (1982) public sector “comprises all institutions financed and maintained by the tax payer”. Amara (2009:43) opines that public sector “refers to all institutions by which government carries out its functions, such as the civil service, parastatals, extra-ministerial departments and public enterprises”. In a broader perspective, the public sector comprises the ministries, departments and agencies (MDA's) as well as government based not-for-profit organizations, international governmental organizations, multinational corporations and quasi governmental organizations in government exercises ownership and, or control.

## **2.2 Classification of e-governance**

There are three broad classifications of e-governance: Government to Government (G2G); Government to Business (G2B); and Government to Citizen (G2C) (Mbanefo, 2016). A special type of G2C is e-democracy which occurs when elected representatives and political parties interact with the citizens nationally or in their constituencies.

G2C — Government to Citizen: The essence of government is to cater for citizens and community development. In G2C the government deals with such matters as providing on-line access to information and services to citizens, This may include paying income taxes as in FIRS, processing of drivers licenses, international passport and issuance of visa. A good number of tertiary institutions in Nigeria process their admissions and fees payment online, Abia State Polytechnic Aba, is one of them.

G2B — Government Businesses: Government often deals with businesses using the internet and other ICTs, such as in e-procurement and auctioning. G2B involves two way interactions: G2B and B2G. Payment of royalties to government by MNC's come under G2B classification. Government at various levels in Nigeria use vehicles manufactured by INNOUSIN, IVM brands, through purchases and transactional arrangements reached by the internet. Bids and other transactions for award of contracts for TETFUND intervention projects are often consummated through online transactions. Regulatory activities of government as in NAFDAC, SON etc, are carried out through ICT. Transactions between EFCC and banks also fall into G2B.

G2G — Government to Government: G2G deals with those activities that take place between different government organizations and agencies with the aim of improving the efficiency and effectiveness of overall government operations. Regulatory activities as in Pencom, EFCC, SERVICOM, Peer Review mechanism in assessing performance of agencies of government, are all typologies of G2C. EFCC helped to expose the financial impropriety of

a former rector at Abia State Polytechnic, Aba ([www.abiapolyefcc](http://www.abiapolyefcc)) which eventually led to his removal. Sharing of revenue between federal, state and local governments come under G2G, relationship and transactions between TETFUND, NBTE, ministry of education and international donor agencies are often consummated through internet. Donations of water facilities by the Rotary Foundation of Rotary International and the Church of Jesus Christ for Later day Saints and regional ICT Centre by the federal ministry of science and technology to Abia State Polytechnic Abia are worthy of special note here. The ICT centre provides the impetus for further G2G relationship by serving as centre for computer-based UMTE examination.

### **2.3 Stages of e-governance**

Different models have been proposed for the different stages in the evolution of e-governance (Mathias and Gaëlle, 2003; Kaaya, 2004; Okot- Uma and Rogers, 2004; Mbanefo, opacity). The UN e-governance global survey has adopted a five stage e-governance model (UN e-government Survey, 2004, 2005, 2008). These are, in order of activity; emerging presence; enhanced presence; interactive presence; transactional presence; and seamless (or networked) presence.

**Stage 1 — Emerging Presence:** According to Adeyemo (2010), in this state, an institution commits to becoming a e-government player. A formal but limited web presence is established through a few independent government websites which provide users with static organizational information.

**Stage 2 — Enhanced Presence:** In this stage an institution's online presence begins to expand as the number of official websites increase, with more dynamic and specialized information content that is frequently updated. According to Adeyemo (ibid), "the interaction is still primarily unidirectional with information flowing essentially from government to the citizen".

**Stage 3 — Interactive Presence:** In this stage an institution's presence on the internet expands dramatically by entering the interactive mode with access to a wide range of governmental institutions and services.

**Stage 4 — Transactional Presence:** In this stage two way interactions between the citizen and the government is included. This is the stage at which e-governance in Abia State Polytechnic operates.

**Stage 5 — Seamless Stage:** This stage presents the most sophisticated level in the online e-government initiative. It is characterized by a full integration of G2G, G2C and C2G, and the reverse interactions. It is also called networked stage (Adeyemo, ibid). Mbanefo, (opcit) describes this stage as, 'the stage of total integration of electronic functions and services across administrative and departmental boundaries.

### **2.4 Principles/Objectives of e-government**

The practice of e-government is premised on the following principles; accessibility, responsiveness, service delivery, efficient management of citizens and promotion of inclusive and participatory governance (Mbanefo, opcit). World Bank ([www.worldbank.org](http://www.worldbank.org)) had defined e-government as,

use by government agencies of information technologies (such as Wide Area Networks, the internet, and mobile computing) that have the ability to transform relations with citizens, businesses and other arms of government. It adds, these technologies can serve a variety of the different ends: better delivery of governing services to citizens, improved interaction with business and industry, citizen empowerment through access information, or more efficient management (AOEMA report).

The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth\cost reduction". Ayo (2014: 76-77) sees e-governance as "the application of ICT to transform the efficiency, effectiveness, transparency and accountability of exchange of information and transaction; with the objective of providing a SMART government. The acronym SMARRT refers to Simple, Moral, Accountable, Responsive, Responsible and Transparent government"

In the light of the foregoing, it is fair to aver that the core objectives of e- governance are:

- i. To make governance more accessible to the citizens
- ii. To make government more responsible by providing information more promptly
- iii. To improve service delivery to citizens through faster identification of community felt needs.
- iv. To ensure efficient citizens' empowerment through access to information or more efficient management.
- v. To promote inclusive and participatory governance
- vi. To improve interactions with business and industry
- vii. To improve transparency in governance
- viii. To reduce corruption
- ix. To increase revenue growth by reducing cost of governance
- x. To increase convenience in governance through digital platform.

### **3.0 Methodology**

The study centres on e-governance and its stage of application in public service in Abia State, using Abia State Polytechnic, Aba as analytical framework. Ten (10) specific ways were identified in the preceding paragraph through which e-governance can improve the practice of public administration but further analyses were based on only four viz:- reductive of corruption; increased transparency; greater convenience and revenue growth.

A combination of systematic, convenience and purposive sampling techniques was used to select twenty four persons from whom data for the study was generated. Amara and Amaechi (2010:64-65) had identified sampling methods to include random, stratified, systematic, quota, cluster, purposive and convenience. Data generated was analyzed using simple percentages.

#### 4.0 Reports

Responses were received from 24 persons. The table below shows the distribution of their responses relative to specific questions.

Respondent	SA	A	D	SD	% in Agreement	% in Disagreement	Total
Reduction in Corruption	17	2	3	2	20.83	79.17	100%
Transparency	1	2	6	15	87.50	12.50	100%
Convenience	2	4	5	13	75.00	25.00	100%
Revenue Growth	6	4	6	8	58.33	41.67	100%

The table shows that 79.2% of the respondents disagree with the proposition that e-governance as practiced in Abia State Polytechnic, Aba has reduced corruption, while 20.8% are in agreement to the proposition. On same proposition about increase in transparency, 87.5% percent are in agreement while 12.5% disagree. Significant 75% agree that e-governance has increased convenience while 25% is in disagreement. This is not so with same proposition on e-governance and growth of revenue in which weak 58.3% responded in affirmative while 41.7% feel otherwise.

The disposition of the respondents on the proposition about c-governance leading to reduction in corruption, according to staff respondent who preferred to be anonymous, could be explained against the backdrop of the 8-month arrears of salaries owed some staff, which was believed to be avoidable, but had to be so because of corruption and mismanagement of IGR fund of the polytechnic. This logic seemingly affected the respondents' responses on growth of revenue, since according to some of them, if the revenue grew, it should be seen on staff salaries and welfare, but that was not the case.

#### 5.0 Conclusion

The paradigm shift from traditional governance to c-governance which is permeating public administration practice globally faces some hiccups in Nigeria. As a result or otherwise, some basic ideologies that underlie the introduction of c-governance had continued to elude some public sector organizations. This work examined e-governance practice in Abia State Polytechnic Aba, and found out that while it has significantly enhanced convenience and transparency in administration, it does not have a positive significant effect on reduction of corruption and the growth of revenue.

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## Practice of Federalism in a Contemporary Society: The Nigerian Experience

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**Abstract:** This study investigated thoroughly the practice of federalism in a contemporary society using Nigeria experience as a point of departure. Federalism is a system that evolved from the idea of containing deep-seated difference within states that are willing to stay together. Though federalism in Nigeria was the brainchild of the colonial overlords, it was adopted to combat the multi-ethnic and plural nature of Nigeria that has in it hundreds of ethnic and tribal nationalities. The study used survey research method. Primary and secondary method of data collection was deployed in the study. The study uncovers that efforts by the Nigeria state towards managing ethnic differences and making Nigeria federal practice work are rather aggravating the problem. The work concluded that true federalism in Nigeria is only achievable if the basic tenets that defined federalism are enshrined in the constitution and completely obeyed.

**Key words:** Contemporary society, practice of federalism

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### INTRODUCTION

The concept of federalism has received broad scholarly definitions as each scholar attempt to define it according to his perception. Till the present day, the concept has no generally accepted definition as attempts at conceptualizing federalism almost always end in confusion. This is because of the broad and pluralized nature of federalism. From an elementary point of view, federalism could be explained to mean the principle around which all the principalities and units constituting a nation-state agreed to federate. These principles have historical, social, economic and even military dimensions to them. Federalism can be described as a system of government in which the indicators of social, political and economic development are pursued by a coordinated effort of both central and other integrated units of government (Friedrich, 1964).

Contemporary writers on federalism such as Machamon and Riker among others view federalism as a mutual interaction between and direct contact with at least two levels of government. This definition is rested upon the fundamental principle that federalism is a form of governmental and institutional structure, deliberately designed by political architects to cope with the twin but difficult task of maintaining unity and peace while also preserving diversity. Federalism also mean a technique for aggregating large areas under

one government (Dike, 2012).

Under this political set-up, the component units are given the opportunity to develop along the trend of their environment and needs. Moreso, federalism could be explained to mean a system of government that entails branching of powers into levels of equal government, which translate to mean a form of a mixed government which involves a branch government and a centralized power which involves provincial, regional, state and other sub forms of government into just a central system (Davis, 1967).

The most cogent, clearly expressed and widely accepted definition of federalism was the one given by Wheare in his classical work "Federal Government". This definition set a new template for contemporary thinking on the subject matter. Wheare (1943) averred that federalism is a method of dividing powers so that the central and regional governments are each within a sphere, coordinate and independent of one another. Wheare went further to explain what he regarded as federal principles to include:

- The division of powers among levels of government
- Written constitution showing this division and
- Coordinate supremacy of the two levels of government with regards to their respective functions.

### ***Typologies of Federalism***

There are different kinds of federalism and nations of the world practice it depending on the nature of their economic life, geographical alignments, economic advantages, historical similarities, political culture etc. However, attempt will be made to explain the dominant type of federalism.

1. Political Federalism: Okey (2012:86) opined that political federalism describes the nature of sharing of duties and responsibilities within the central and component government. He stated further that the examination of political federalism probes into the issues of degree of political power given to the various levels of government. Political federalism is the very reason behind the introduction of exclusive, concurrent and residual list and the items in it. In some country of the world that practices federalism, the government holds a relatively stronger power while the regional government enjoys lesser powers. The former represent what is obtainable in Nigeria while the latter is a reflection of the situation in the United States of America.

2. Fiscal Federalism: It is a consequence of federalism and is concerned with the relationship among the various levels of government with respect to the allocation of national revenue and the assignment of functions and tax powers to the constituent units in a federation (Nyong 1998).

Fiscal federalism is basically concerned with revenue allocation formular – the sharing of national revenue among the various tiers of government (vertical revenue sharing) as well as the distribution of revenue among states (i.e. horizontal revenue allocation). Fiscal federalism defines the degree of division of revenue between the centre and the component units as well as between the components. It examines the extent of financial control which each level of government exercises. It examines the power of taxation granted each level of government as well as any other sources of fund allowed in level of government (Okey, 2012). Fiscal federalism also refers to the use of funds allocated

from the national program is supported. A perfect example of fiscal federalism is the categorical grant, whereby the national government gives money to the states and that money has requirement attached.

#### Machineries Used in Managing Nigeria's Fiscal Federalism

Asogwa (2009) highlighted the following as the machinery used in managing Nigeria's fiscal federalism;

A. Federation Account Allocation Committee: Officials of federal and state governments along with Revenue Mobilization Allocation and Fiscal Commission and Central Bank of Nigeria meet monthly with revenue generation agencies to share revenue accruing to the federation account in the preceding month. The meeting which is known as the Federation Account Allocation Committee (FAAC) meeting is chaired by the minister of state for finance and is attended by the Accountant-General of the federation, states commissioners for finance and accountant-generals and revenue generating agencies such as the Nigerian National Petroleum Corporation (NNPC), Federal Inland Revenue Services (FIRS), Nigeria Customs Services (NCS) and department of petroleum resources (DPR). Federation account is a special account into which shall be paid all revenue collected by the government of the federation except proceeds from personal income tax of the personnel of the Armed Forces of the federation, the Nigerian Police, the ministry or department of government charged with the responsibility for external affairs and the residents of the federal capital Abuja. The federation account is a distributable pool account and shall be distributed among the federal, state and local governments. These monies are distributed among the three tiers of government using approved revenue sharing formula from time to time. It was established by the Raisman's Commission in 1958 as Distributable Pool Account for Cushioning the effect of differences in capacity in a situation in which derivation was used for sharing revenue among component units that had different degree of natural resources. Since 1977, it came to be known as the Federation Account Okey, (2012)

#### B. Revenue Mobilisation Allocation and Fiscal Commission (RMAFC).

The CFRN 1999 (Section 31, part 1 of the third schedule) provided for this commission to among other functions, the monitoring of the accruals to and disbursement of revenue from the federation account. The commission has the following composition;

a) Chairman and

b) One member from each of the state of the federation and Federal Capital Territory, Abuja, who in the opinion of the president are persons of unquestionable integrity with requisite qualifications and experience.

The powers and functions of the commission include the following:

- Systematic design and effective mobilization of sources of a public sector revenues.
- Periodic review of revenue allocation principles and formula such that would minimize short-term political pressure.

- Prescription and application of revenue allocation formulae after due approval by the federal government for the purpose of sharing the federation account between the federal, state and local governments.
- Monitoring the accruals and disbursements of revenue from the federation account, the states joint account, the local government joint account, the various special purpose accounts and such account that may from time to time be established or designated by the commission with the approval of the federal government.
- Ensuring full compliance with established revenue sharing arrangements as well as full public accountability for all funds so allocated to various governments/or agencies involved in the disposition of the federation account and many other powers and functions.

#### C. State-Local Government Joint Allocation Account Committee

The formation, powers and functions of this committee varies from state to state though they share close similarities. Enugu state is used as a reference point. The Enugu State Joint Local Government Account (Distribution of Revenue and Other Related Matters) law of 2001, No.6 provided as follows with regard to Joint Allocation Account Committee (JAAC)

#### **Membership**

1. A chairman;
2. Representative of each of the three senatorial zone of the state;
3. Local government treasurer representing each senatorial zone;
4. Representative of ministry of finance;
5. Representative of ministry in-charge of local government; and
6. A secretary.

All these appointments are made by the Governor and the remuneration of salaries are also subject to the approval of the governor. The tenure for these positions is one year subject to renewal of one additional year except for local government treasurers who have one year which is not subject to renewal. The committee has a good number of functions which involves;

- To open and maintain joint account.
- To review from time to time the formula for the distribution of funds to local governments councils.
- To advise state and local governments on fiscal matters and methods by which their revenue can be increased.
- To monitor the disbursement of revenue from the joint account etc.



However, it is necessary to note that before every revenue accruing to local governments from the joint account can be distributed, the following first line charges are deducted.

- a) Primary school teachers' salaries and overhead
- b) Money for local government pension board for payment gratuities and pensions
- c) One percent (1%) training fund for local government service commission for capacity building of all staff of the local government.
- d) Traditional rulers' stipends.

### ***Principles of Fiscal Federalism***

The following are principles guiding fiscal federalism according to Ekpo (2004)

I. The Principle of Diversity: This means that the federal system must have the ability to accommodate a large variety of diversities. For this reason, the fiscal system must provide scope for variety and differences, to supply national, regional and local public goods.

II. The Principle of Equivalence: Based on the geographical incidence of different public goods, allocation of revenue must be efficient to equalize the differences with a combination of taxes and public good services.

III. Principle of Fiscal Equalisation: This principle posits that in order to ensure minimum level of public goods and services, some degree of fiscal equalization is required. This is as a result of differences in resources endowment in the states of the federation. For this reason, a well rounded programme for reducing financial inequalities among the states will ensure purity among states and local governments and reduce tension surrounding revenue allocation in Nigeria.

IV. The Efficiency Principle: This principle implied that efficiency must be applied in the allocation of resources. In addition, each level of government should maximize its internal revenue earnings at maximum tax efforts.

V. The Principle of Derivation: This principle opines that the component units in a system should be able to control some of its own resources as they desire. Resource control is regarded here to the extent that the federation is not undermined.

VI. The Principle of Centralized Redistribution: This principle states that redistribution function of fiscal policy through progressive taxation and expenditure programmes should be centralized at the federal level. This is because if it is decentralized, it can result in locational decision.

VII. Principle of Centralize Stabilization: This requires the use of fiscal instruments (variation in taxation and expenditure) for achieving macroeconomic objectives of growth, stabilization and full employment at the national level.

3. Dual Federalism: Patterson (1999) averred that dual federalism is a constitutional doctrine which holds that certain policy areas such as interstate commerce and defense are

the clear and exclusive province of national authority, while other policy areas such as public health and intrastate commerce belong clearly and exclusively to the state.

This doctrine is therefore based on the idea that a precise separation of national and state authority is both passive and desirable to make the system work optimally. This kind of federalism is nicknamed "Layer Cake Federalism". This is because people view the relationship between governments as a series of layers, localities on the bottom, states in the middle and the federal government occupying the top spot.

Bringing this to the Nigeria scenario, primary education, primary healthcare and rural development are seen as local government functions. Agriculture, education policy, currency, aviation, migration and immigration, police recruitment are preempted by the central government. Scholars like Grodzins and Elazar have seriously objected the idea of the "layer cake" administrative federalism on the ground that it has substituted the logic of cooperation.

4. Cooperative Federalism: Societies of the world excel and perform very well in the present clime because of interdependency. The idea behind cooperative federalism is predicated on the fact that problems affecting citizens of country in one part of the country are likely to affect citizens living elsewhere in the country. For instance, problems of insecurity, environmental pollution, unemployment, poverty, flood, disease etc affecting Nigerians living in Benue state are likely to affect Nigerians living in Rivers state.

The implication is that this situation will inform and encourage the decision of the central, states and local government policy makers to collaborate their efforts to solve a particular problem that is of interest to them. Nwosu (1992:268) in Asogwa (2009:114) observed that in cooperative federalism arises because several separate government share a divided responsibility for regulating a single economic social structure. It is not common to see that any constitution could be drafted which would enable each to perform its specific functions impinging on the others. Therefore, their activities are inevitably mingled and cooperative arrangements must be clearly worked out. This collaborative effort of various levels of government is what is regarded as cooperative federalism.

The difference between this system of federalism and the dual federalism is like the difference a marble whose levels flow together and a layer cake whose levels are separate (Patterson, 1997:57). Again in Nigeria for instance, medical programme like the National Programme on Immunization (NPI) which is aimed at eradicating polio among Nigerian children of tender age, the Universal Basic Education programme which has assisted in the enrollment increase of primary school pupils and also in the construction of classroom blocks in the states of the federation for basic education of Nigerians. Agricultural and rural development programme etc all being undertaken through the collaborative effort of all the levels of government (Asogwa, 2009).

Also the ongoing policy of Muhammadu Buhari to feed primary school pupils across some states of the federation is another perfect example of cooperative federalism. Cooperative federalism describes the belief that all level of government should work together to solve common problems.

5. QUASI FEDRERALISM: As earlier explained, federalism is associated with legal arrangement which defines the powers and functions of the different tiers of government.

This is what is obtainable in countries that practices federalism like USA, Nigeria, Canada, Mexico, India, Argentina etc. This legal division of powers and functions is absent in Quasi-federal state, but powers and functions are shared between the levels of government in practice without a legal framework in reality that will define such powers and functions.

6. Centralized Federation: This is a kind of federalism whereby most powers are given to the federal government thus weakening the capacity of the states to legislate on matters they consider essential to them.

Also, centralized federalism centers on the idea that the federal government should be responsible for setting all national policies and the state and the local government should be responsible for carrying out these policies. Nigeria presents a perfect picture of centralized federalism. This is because most powers of the government are concentrated in the occlusive legislative list in the 1999 constitution. Other examples of countries that practice this kind of federalism are Great Britain and France.

### **The Evolution of Nigeria Federalism**

Many view the adoption of federalism in Nigeria as historic and circumstantial. It started with the activities of the nationalists who fought tirelessly for the independence of this great country. Nigeria federalism could be traced to the amalgamation of this Southern and Northern Protectorate as one country in 1914 by Lord Fredrick Lugard. Also, in 1922, following the appointment of High Clifford as the governor-general of Nigeria, he divided the country into Southern province and Northern province. He introduced the first ever elective principles in Nigeria which led to the formation of the first political party (NNDP) in Nigeria in 1923. The party was championed by late Herbert Macaulay. Hugh Clifford also introduced a single legislative council for the colony of Lagos and the Protectorate of Southern Nigeria.

In 1946, when Arthur Richard took over the helms of affairs from Bernard Bourdilion as the governor-general of Nigeria, he introduced the principle of regionalism and it was formally enshrined in the constitution which recognized the three regions via Eastern, Western and Northern regions. He also established a single legislative council for the whole country, the southern and western Nigeria was now united into one legislative council. The constitution also recognized the regional councils and allocated some political deliberative powers to it. Moreso, during the 1953 London Constitutional Conference, a true and clear federal system of government was adopted for Nigeria. In that conference, it was generally agreed that Nigeria should adopt a complete federal system of government with a clear division of power between the federal and the component government.

Also, as a pathway to Nigeria federation, the social units within the respective values and orientation strive to express their feelings on national issues and governance, each section, region or ethnic group struggles to perspective its influence over others in governance. These inherent ethnic and sectional differences led to the adoption of federalism in Nigeria in the early history of our nationhood and quest for development.

### **Why Nigeria Adopted Federalism**

1. The very reason for the adoption of federalism in Nigeria was to allow and encourage the people at the grass root take active part in local affairs.

2. It was also to create and encourage healthy competition and innovation among the component units. This will make the component units grow and develop at their own pace.
3. NATIONAL INTEGRATION: Federalism is all about national integration, it creates cohesion and unites the citizens of a country. It will eliminate the problem of separation, ethnic rivalry and fear of domination of minorities.
4. FEDERALISM IS A FRAMEWORK FOR DEVELOPMENT: As posited earlier, federalism decentralizes power. This feature of federalism is widely believed to be a veritable framework for even development. The advanced country where Nigeria had borrowed leaves from, such as USA practice federalism. This made Nigeria believe the choice of federalism will help them achieve the status of the USA, hence the choice of federalism.
5. POLITICAL STABILITY: An outstanding motive of federalism is to promote unity and to force the government to be closer to the people. Federalism was born from the idea of peaceful co-existence of citizens, stability and cohesion to promote national integration.
6. FOR THE PURPOSES OF EVEN DEVELOPMENT: The wealth of Nigeria is not in all the states. Some state especially the Niger Delta states are far more richer than the others. Nigeria adopted federalism to ensure these wealth spread across other states who do not have these natural resources in abundance so they can develop and take good care of their needs as well.
7. COLONIAL BACKGROUND: Nigeria has been severally referred to as a product of British Colonial suturing. A key reason for Nigeria's federalism is common historical/ancestral background. The tongues and tribes that made up Nigeria have one colonial history. Moreso, colonial masters with the Richard's constitution in 1947 launched Nigeria onto the path of the present federal system of government via regionalization of the country.
8. THE SIZE OF NIGERIA: With the total area of 923,768km<sup>2</sup>, Nigeria cannot justifiably be administered by a lone "leviathan" from the top. Such arrangement would breed neglect, frustration and aggression, no thanks to red-tape dominance in unitary system of government, thus promoting efficiency in service delivery and governance.
9. THE PLURAL NATURE OF NIGERIA: Nigeria is a plural society with over 1000 ethnic groups and tribes. Besides the major three; Igbo, Hausa and Yoruba, there are other macro and micro ethnic minorities in the country. Federalism was favoured to address the situation.

#### **BASIC FEATURES OF NIGERIA FEDERALISM**

1. The relations between the federation and its entities are governed by the federal constitution.
2. There are two legislative chambers at the federal level (Senate and House of Representatives), one legislative chamber (House of Assembly) at the state level and the subjects of the federation have equal representation in one of the chambers i.e. the senate.

Every state in Nigeria has three senators in the Nigerian senate, while House of representatives is on proportional representation.

3. Foreign policy activities are conducted by the federal government on behalf of the state.
4. States use their own constitution, decrees and other normative legal acts that will be legal in their territory on a par with federal constitution and federal laws.
5. States of the federation have their own colour, emblems, anthems and other signs of the state except state sovereignty.
6. States in Nigeria are not independent subjects to international laws.
7. The entities of Nigeria are not allowed to secede from the federation or to unilaterally terminate links with the national government.
8. No amendment(s) can be made to the federal constitution without the approval of the states of Nigeria.
9. State power is divided between the federal government and the government of the states of the Federation. .
10. Law courts are organized according to dual principles: each level has its own court to ensure effectiveness of the laws.
11. Elections into the executive arm of the government at the federal and state level and into the national and state parliaments is conducted every four years.
12. Independent National Electoral Commission (INEC) conduct elections for the federal and state government while State Independent Electoral Commission conduct elections for the local government.

### ***STRUCTURES AND INSTITUTIONS USED IN SERVICING NIGERIA FEDERALISM***

Countries of the world that practices federal system of government has some institutions and structures established for managing the relations between the federal government and the competent units. The situation is the same in Nigeria. Some of these institutions and structures will be discussed here;

1. COUNCIL OF STATE: Section 6 of third schedule (part 1) of the CFRN 1999 gave impetus to this council. The views of the membership include president, vice president, senate president, speaker of House of Representatives, military head of state, all former chief of justices of Nigeria and attorney general of Nigeria. The council has the responsibility to advise the president on matters like, national population census, prerogative of mercy, award of national honours and maintenance of public order within the federation. The council in addition to the above is expected to again advise the president with regards to the following federal commissions. The Independent national Electoral Commission (INEC), the Judicial Commission (NJC) and the National Population Commission.



2. NATIONAL ECONOMIC COUNCIL: Membership of this council is composed of the following, the vice president as the chairman, the governor of each state of the federation and the governor of the Central Bank of Nigeria (CBN). The National Economic Council was created as a mechanism for the coordination of the different levels of government in respect to economic matters. The council is saddled with the responsibility of advising the president concerning the economic affairs of the federation and in particular on measures necessary for the economic planning effort of economic programmes of the various governments of the federation. The National Economic Council was provided for in Section 153(1) of the CFRN 1999.

3. FEDERAL CHARACTER OF NIGERIA COMMISSION: One fundamental provision of the CFRN 1999 which is geared towards servicing Nigeria set-up is contained in section 14(3) of same constitution. The composition of the government of the federation or any of its agencies and the conduct of its affairs shall be carried out in such a manner as to reflect the character of Nigeria and the need to promote national unity and also to command national loyalty, thereby ensuring that there shall be no predominance of persons from a few states or from a few ethnic or other sectional groups in that government or in one of its agencies.

The idea behind federal character principle is that the president shall appoint at least one of his ministers from each state who shall be indigene of such state. Federal character principle is predicated on the fact to maintain "National Unity" and "National Loyalty", there must be harmonious federal state relations. The aim again is to ensure those in the minority states are not shortchanged and sidelined in the scheme of things of the federation thereby disabusing their minds from alienation.

The same federal character principle was extended to the state local government relations through a modified version of the provisions relating to federal-state level. This is provided for in Section 14(4) of some constitution. It is however heartbreaking to observe that the aim of the federal character principle in the lopsided appointment of successive federal government and different state governments. The present administration of Muhammadu Buhari is the worst heat of it.

4. THE CODE OF CONDUCT BUREAU AND TRIBUNAL: The code of conduct bureau is one of the institutions established by the CFRN 1999 Section 153(1). The bureau has a chairman and nine other members, each of whom at the time of appointment shall not be less than fifty years of age. The body has offices in each state of the federation. The bureau has the following responsibility;

- a) Receive declarations by public officers made under paragraph 12 of part 1 of the fifth schedule of the 1999 CFRN
- b) Examine the declaration in accordance with the requirements of the code of conduct of any laws.
- c) Retain custody of such declarations and make them available for inspection by any citizen of Nigeria on such terms and conditions as the national assembly may prescribe etc.

The code of conduct tribunal, on the other hand imposes punishments upon any public officer found guilty of contravening any of the provision of the code. These two bodies are

federal government agencies established to serve as watch dog over the public officers in the federation which include states and local government officers (Asogwa, 2009)

5. INDEPENDENT NATIONAL ELECTORAL COMMISSION (INEC): The CFRN, 1999 section 153(1) provided for this commission. The commission is composed of the following; a chairman, who shall be the chief electoral commissioner and twelve other members to be known as National Electoral Commissioner. A member of the commission shall; be non-partisan and a person of unquestionable integrity. The commission is expected to:

- Organize, undertake and supervise all elections to the offices of the president and vice president, the governor and deputy governor of a state and to the membership of the senate, the house of representatives and the house of assembly of each state of federation
- Register political parties in accordance with the provisions of the constitution and Act of the National Assembly.
- Monitor the organization and operation of political parties including their finances, conventions, congresses and party primaries etc.

6. DERIVATION PRINCIPLE: This is a mechanism established by the federal government for sharing revenue between the national government and the state government on one hand and between the state government and local government on the other hand. The 13% derivation principle for the oil producing states is a perfect example. According to Okey (2012); the adoption of this principle entails the sharing of revenue generated in the federation in such a manner that these component units from which greater portion of the national revenue is generated also receive greater share in the allocation of revenue.

7. REVENUE ALLOCATION FORMULA: This is a statement expressing the pattern of distributing national revenue between a central government and component government and among component governments. It consists of principles and percentages ratio, indices upon which the sharing of revenue is carried out (Okey, 2012:81).

### **ISSUES IN NIGERIA FEDERALISM**

That the federal system of government was designed primarily to solve the fear of alienation of the minority by the majority; to address the multi-ethnic and plural nature of Nigeria, to ensure even development and many more can never be over emphasized. To boldly say that these issues has been squarely addressed with many years of the practice of federalism can never be true as more and more of these issues keep coming up. The following constitutes area of problems in Nigeria federal system;

1. REVENUE GENERATION AND ALLOCATION: In an attempt to solve this endemic problem, various principles of revenue allocation has been adopted by commission of enquiry/panels setup by the federal government in recent times. These principles include; principle of derivation, national interest, population, equality of states, even development etc. In the present day Nigeria, the resources of the country belongs to the national government. Oil is the life wire of Nigeria and whatever is generated from it is kept in the federation account and is shared monthly among the different levels of government- federal, state and local government. This is never supposed to be so as the component units

to tap their resources, generate revenue from it and pay an agreed percentage in the form of tax to the federal government. This act has turned the component units into beggars begging for what rightly belongs to them.

A record example is the oil producing states of Niger Delta who are made inferior and subservient to the centre. This act has forced the youths of the region to take up arms against the federal government. There reasons has been despite the vast wealth produced in the area, plus the negative impact of oil industry on their land, the people of the area remain poorer than others overtime, they cry very loud against not only marginalization and exclusion but outright neglect in the sharing of the wealth of the native and lost prominent men in the fight against the federal government e.g. The Ogoni<sup>9</sup> (Ehiodo, 2012:68). Till this present day, Nigeria is still struggling to enjoy relative peace in the Niger Delta region and this has been the result of lopsided revenue allocation formula. Revenue allocation is a source of controversy and huge obstacle to the practice of federalism in Nigeria.

## 2. CENTRALIZATION OF THE POLICE FORCE

The police high command is centralized and is headed by an inspector general of police, appointed by the president (federal government). The various state commissioners of police take orders directly from the police inspector general. The state governors who are flattered with the title of chief security officer in the states have no control over the police commissioner in their states. When the governors give instructions to the police commissioners, they police commissioners will need to first consult their boss (IG) before taking action, leading to delay and more escalation of the crises situation. In a situation where the state government is at loggerhead with the central government, your guess is as good as mine. In another development, it will be practically a difficult task for the federal government to post a police commissioner to another state that it is not his state of origin and expect such police officer to fight crime very well. How on earth do you expect forexample Ogoni man who is a police officer to fight crime very successfully in Lagos, an unknown terrain ? This is because he has no good understanding of the terrain and therefore cannot execute his plan and strategies against terrorists very perfectly. This can as well be fingered as one of the reasons why crimes continue unabated in Nigeria.

## 3. THE UNKNOWN IDENTITY OF THE THIRD TIER LEVEL OF GOVERNMENT

One of the very reasons why the 1976 local government reform in Nigeria was widely celebrated and applauded was that it makes the local government a third tier level of government and it was formally enshrined in the constitution thus making it co-equal with the federal and state governments. By such position, local government in Nigeria is supposed to be politically and economically independent from other levels government. But this is not what is obtainable in reality as local government in Nigeria is made an appendage of the state government. This is a huge mockery to federalism. Nigeria federalism structure is in anti-thesis to the principle of federalism which recognizes only two levels of government. With the level of political culture in Nigeria, granting autonomy to local government will cause more problems of governance to state governors. You cannot imagine a situation where some local government boss will run directly to the president and boycott the state governors and will even want to flex muscle with state governors. This will result to breach of peace as the state will become a theatre of war.

#### 4. CONTINUED DOMINANCE OF GOVERNMENTAL POWERS BY THE FEDERAL GOVERNMENT

In Nigeria, the state government is claiming superiority over the local government just as the federal government is claiming superiority over them. Till date, it cannot be completely said that the state government are autonomous. This ugly situation has informed the decision of many political thinkers and activist to call for political power devolution so that states can enjoy real autonomy as it is done in other advanced clime. This excessive political power wielded by the central government has made them take certain decisions without minding the component units, as the best they can do is to cry out loud. The decision of the federal government to spend money from the excess crude account without first taking the 13% derivative fund meant for the oil producing states which attracted nation-wide condemnation is one example of such excessive power of the centre.

#### 5. POLITICISATION AND OUTRAGEOUS NUMBER OF COMMITTEE IN THE PARLIAMENT

Committees are where core legislative business are carried out. This is why the import of parliamentary committees cannot be cajoled with. Parliamentary committees are supposed to be carefully selected with distinct responsibility attached to it but this is not what is it in Nigeria, as it is used to settle loyal party legislators. Good numbers of committee are headed by members of the leading political party in the parliament without recourse to area of specialization and these are “money spinning” committees. And because their interest was to get the proceeds of such committee, they are carefree about carrying out thorough committee work as their aim has been met to the detriment of Nigerians.

Again because major legislative work is done in the committee, judging from the foregoing, the committee report to the general house will be lopsided and the result will be one sided legislation. Also, Nigeria’s National Assembly has about 165 committees. 68 and 97 for the senate and House of Representatives respectively. This is never a welcome development. In most cases, some of the committees do not perform any noticeable function throughout their lifespan in the parliament but fund is allocated to them for committee seating.

In the USA, where Nigeria imported federalism, the size of their national parliament is almost times two smaller than that of Nigeria. Though it can be argued that it is a different strokes for different folks, the big question should be how has Nigeria fared with this structure? Has it helped Nigeria federalism achieve a desired pace of growth and development? We better try something different. Multiple parliamentary committee is not helping the country and should be jettisoned.

#### 6. DUAL NATURE OF THE COURT SYSTEM (JUDICIARY)

The existence of many courts to a large extent affects the practice of federalism. This is because it is expensive to run and maintain. In Nigeria, there is the presence of many courts. This to some great extent makes lottery out of the judiciary, making it difficult for the integration of legal system. Though the supreme court holds as the highest court which guarantees uniform application, but the various orders and judgement of the high courts with concurrent jurisdiction affect the practice of federalism in Nigeria.

#### 7. OWNERSHIP OF RESOURCES (RESOURCE CONTROL)

Nigeria has witnessed and is likely to witness more inter-ethnic crises on the ground of

who to control the resources of the land and this if not given quick attention will continue to put Nigeria in an unfortunate situation. Resource control agitation is a call for the re-organization of fiscal federalism in such a manner that component units could generate and utilize revenue arising from the exploration and exploitation of mineral and non-mineral resources in their territorial areas (Okey, 2012:103). It should be noted that this usurpation of resource control by the central government was initiated by the Lt. Col. Yakubu Gowon (administration) regime as an expedient measure to pursue the 1967-70 civil war. Since then, states especially Niger Delta states has been transformed into beggar pleading for their rightful share of their resources and this has resulted to several crises between the people of the region and the federal government. One example that readily comes to mind is the Ijaw in particular, under the banner of the Ijaw State Movement had been seething with rage that their territory had provided much of the country's wealth yet they got nothing from it, so after the Jan. 15 1966 coup, the Ijaws led by Isaac Jasper Adaka Boro a former student of University of Nigeria took up arms against the Ironsi regime. He proclaimed the independence of the Niger Delta People's Republic, declared a state of emergency and announced that the territory would be tax free until fully industrialized but the federal military government dispatched troops and crushed the rebellion (Ehiodo, 2012:69).

#### **8. THE ISSUE OF SECESSION**

In a federal set-up, there is always the problem of secession. Agitation for self determination by those who found themselves in the minority group is continuous and this threatens the practice of federalism. The activities of Niger Delta Avengers (NDA) agitating for Niger Delta Republic and the Indigenous People of Biafra (IPOB) clamouring for the Republic of Biafra is a typical example.

#### **RECOMMENDATIONS**

1. Each state of the federation should be allowed to determine the minimum wage it can pay her workers. The idea of enforcing a uniform minimum wage should stop henceforth as it is never a healthy practice. Let there be competition in the system.
2. All existing and potential precursors to cultural and ethnic conflicts should be reasonably suppressed if Nigeria federalism is tenable.
3. The federal executive must ensure that national resources are utilized equitably so that no component unit will feel cheated. Nigeria is multi-ethnic in nature. This means that any misguided action by the federal government in the utilization of resources would always trigger off reactions from the component units. This is one fact that the leadership at the centre must always bear in mind (Okey, 2012).
4. Parliamentary committees in both the state and national assembly should be reduced to such a manageable size, the formation should not be politicized and it should be made functional to ensure quality legislation that the impact will be far reaching.
5. State independent electoral commission should be restructured, strengthened and rationalized for effective and efficient service delivery.



6. The national and state parliaments should put up a legislation to determine the total number of aides to the president and state governors. It has been observed that state governors create unwanted offices and fill them up with party loyalists, family members, friends etc even when they are working nothing thereby contributing to high cost of governance.

7. State police should be created to fight crimes within the state. This time those who know the terrain will be incharge of combating crime and one can be assured there will be no hideout for criminals.

8. The statutory allocation to the local government from the centre should be abolished, while allocation to the states should be increased so that each state could tend to localaffairs through, offcourse the local governments (created and managed by each state) (Okey, 2012).

9. All resources found in the states to be explored and managed by the state, an agreed percentage to be paid as tax to the federal government.

## **CONCLUSION**

Nigeria federal structure since inception has witnessed structural and fiscal reformation as new realities emerges and this is not without major deficits but like in all political organization, there is no perfect policy. The Nigeria federal structure may not have succeeded in all its political ills, it is nonetheless what has kept as united. However, even non federal states are faced with similar problems bothering on threats to its very existence.

Therefore our inability to have stability in our political system in spite of years of practicing federalism should not be taken as bankruptcy of the system. It is a proven fact that the best form of government for Nigeria is the federal system with its basic tenets properly and carefully administered. Hence, I hereby submit that true federalism in Nigeria is only possible and achievable if the basic tenets that defined federalism are enshrined in the constitution.

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## The Impact Of Electronic Card Reader On Nigeria's General Elections: An Appraisal (2012-2017)

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**Abstract:** Nigeria has had a history of poorly organised electoral process that is marked with voter intimidation, ballot box snatching and stuffing, vote buying, multiple voting, underage voting, falsification of results and other electoral malfeasances. The introduction of the permanent voters' cards (PVC) and the voters' card reader— an anti-rigging technological device—for the authentication of PVCs and voters is to curb these electoral ills. This paper investigated the impact of the voter's card reader on Nigeria's General Elections between 2012 – 2017, and relied on documentary method for the generation of data. The cybernetics model of communications theory was adopted as the theoretical framework. Resting on four basic pillars: circularity, variety, process and observation; the cybernetics theory developed by Norbert Wiener focuses on how systems function and how they communicate with other systems or with their own components. The qualitative method of data analysis was employed to analyse the data. The paper found that the use of the voter's card has curtailed voter's impersonation, multiple voting, over voting or result bloating; has rekindled the confidence of most Nigerian voters and international partners and accounts for the drop in the volume of post-election petitions. It concluded that the voter's card reader is a technological advancement in Nigeria's electoral process and has made a positive impact in Nigeria's General Elections. Though it has not functioned optimally nor has been very reliable to accredit all voters throughout the process without the resorting to the use of manual accreditation. Therefore, we recommends that the technology and software be improved to effectively verify and authenticate voters at a good speed during accreditation. Election officials should also be trained well enough to handle the device for maximum performance. Further studies have to investigate prospects of modernization of Nigeria's electoral process through technology.

**Key words:** Contemporary society, practice of federalism

## **INTRODUCTION**

The Independent National Electoral Commission (INEC) introduced the voter's card reader also known as smart card reader for use, for the first time in Nigeria's electoral process in the 2015 general elections. The use of the voter's card reader for the purpose of voters' accreditation during an election is an INEC reform and a critical component of the 2015 general elections. The card reader is configured for use at specific polling units to authenticate permanent voter's card (PVC), verify voter's identity and provide an electronic backup for accredited voters on Election Day. Prior to its use in the 2015 general elections under the leadership of Prof Attahiru Jega, a number of technologically based reforms among which are biometric register of voters and advanced fingerprints identification system were introduced by INEC-The Nigerian Election Management Body (EMB). Today, technology is used in the electoral process of many countries across the globe for voters' registration and register compilation, to draw electoral boundaries, to manage and train election officials, to conduct voter education for stakeholders, to print ballots, to count and record votes, to announce and publish election results etc.

Election is an important component of democracy. Election, broadly speaking is the process of elite selection by the eligible voters of the population in any given political system. According to the Wikipedia, a general election is an election in which all or most members of a given political body are chosen. According to The Electoral Institute (TEI) report, general elections are elections conducted in the federation at large for federal and state elective positions. It involves the election of representatives to legislative and executive positions from constituencies throughout the country. Historically, Nigeria has held general elections in 1959, 1964, 1979, 1983, 1993, 1999, 2003, 2007, 2011 and 2015 respectively. Nigeria's fourth republic has witnessed general elections in 1999, 2003, 2007, 2011 and 2015. Since, after the 2015 general elections, there have been in-between occasions of re-run and bye-elections across the country.

Elections are meaningfully democratic if they are free, fair, participatory, credible, regular, competitive and legitimate. However, elections in Nigeria over the years have been marked with a wide range of electoral malpractices such as multiple voting, voting by under-aged persons, impersonation, manipulation and falsification of results etc. Electoral malpractices make the citizens lose confidence in the electoral process, undermine the democratic process and usually lead to electoral violence, political instability and insecurity, which bring about a major setback in the development and consolidation of democracy.

The voter's card reader was a thought out technological innovation to prevent electoral malpractices in the 2015 general elections and subsequent elections in Nigeria. The proper application of this and other technologies to the process can increase administrative efficiency, improve political transparency, and reduce long-term costs of conducting elections.

The use of the voter's card reader has generated varying opinions and discussions by stakeholder's especially political scientists on its strengths and weaknesses in the pursuance of free, fair and credible elections in Nigeria. On this score, this paper intends to examine the concept, uses, strengths and weaknesses of the voter's card reader in order to arrive at its impacts on Nigeria's general elections.

## **PROBLEM STATEMENT**

According to an interview with the program manager of the International Foundation for Electoral Systems (IFES), a legitimate electoral process and public confidence in democratic governance depends on both the actual and perceived integrity of an election (Hedlund, 2015). Elections in Nigeria is popularly characterized by multiplicity of double voting, ballot box snatching, violence, impersonation, voting by under-aged persons, manipulation and falsification of results, which altogether destroy the integrity and credibility of the electoral process. The procedures for organizing the elections and counting the votes are generally not transparent and leave so much room for election malpractices. These have led to massive disinterest and loss of confidence by voters in the credibility of elections in Nigeria. Consequently, many eligible voters have become politically apathetic not because they do not want to participate in the electoral process; but because they believe, their votes would not count.

The prevalence of electoral irregularities in Africa especially Nigeria, has accentuated the clamour for the use of voting technologies for uncovering and reducing electoral malpractices by which corrupt politicians ascend to power illegally. The idea of the introduction of the voter's card reader for the 2015 general elections was to curtail or eliminate electoral malpractices but was greeted by a public outcry for fear that INEC would use the technology to aid and cover up electoral malpractices. The approval by the Senate for the use of voter's card readers for accreditation in the election process has equally generated debates by some stakeholders and political scientists. While some expected that the device would promote the credibility of the elections, others expressed fears that it would be a failure and may be manipulated by INEC.

The use of the voter's card reader during the 2015 general elections came with some troubles ranging from technical glitches to operational inefficiencies of the election officials whose duty it was to operate the device. The malfunctioning of the voter's card readers in many polling units across the nation prompted INEC to instruct the election officials in the concerned polling units to revert to the manual system of accreditation.

## **OBJECTIVES OF STUDY**

The main objective of this study is to appraise the impact of voter's card readers on general elections in Nigeria between 2012-2017. Some specific objectives are:

1. To assess the relevance of the voter's card readers in the election process in Nigeria.
2. To evaluate the reliability of the voter's card reader during the election process in Nigeria between 2012 and 2017.
3. To determine the impact of the voter's card reader on general elections in Nigeria between 2012 and 2017.

## **RESEARCH QUESTIONS**

From the objectives of this study as stated above, these research questions are feasible and useful to guide the study:

1. Is the use of the voter's card reader useful in Nigeria's general election process?
2. Is the voter's card reader a reliable device for use in Nigeria's election process between 2012 and 2017.



3. What is the impact of the voter's card reader on general elections in Nigeria between 2012 and 2017?

### **CONCEPTUAL FRAMEWORK**

According to Webb, Gibbins, and Eulau, (n.d.) election is the formal process of selecting or rejecting a political proposition by voting. The Carter Center (2018), notes that an election is much more than the election day; "it is a cyclical process that unfolds long before and after voting. An electoral cycle starts at the end of one election and runs through the beginning of the next election. It has three basic phases: pre electoral preparations, electoral operations and post-electoral strategies (UNDP, 2010).

The origin of elections in the contemporary world lie in the gradual emergence of representative government in Europe and North America beginning in the 17<sup>th</sup> century. Governments were believed to derive their powers from the consent of the governed from time to time at regular intervals. Today representative government and elections are the bedrock of democracy – a system of government by the whole population or all the eligible members of a state through elected representatives.

Following decolonization in some African countries in the 1950s and '60, a number of countries held elections though many reverted to authoritarian form of rule. In the 1970s, elections were introduced in some African countries such as Ghana and Nigeria following the dissolution of some military dictatorships.

Elections enable voters to select leaders and to hold them accountable for their performance in office. According to the Carter Center (2018) elections provide political education for citizens and ensure the responsiveness of democratic governments to the will of the people. They also serve to legitimize the acts of those who wield power.

General election is an election that holds across the country for given political positions within a particular day or time. In presidential systems, a general election is a regularly scheduled election where both the president and either a class or all members of the national legislature are elected at the same time but can also involve special elections held to fill prematurely vacated positions (Wikipedia). A general election day may also include elections for local officials.

### **ELECTION TECHNOLOGY**

Automation is usually spurred by a sense of urgency to overcome a specific problem or situation. Most electoral management bodies in the world today employ the use of innovative ICT technologies with the aim of improving the electoral process and eliminating the cumbersome processes associated with the manual procedure. It is believed that technology not only makes electoral processes cleaner, easier and faster but can also makes it more secure, reliable and sustainable. Relevant technologies for electoral processes range from basic office automation tools like the word processing and spread sheets to sophisticated data processing tools like data base management systems, optical scanning and geographic information systems.

It is pertinent now to point out the various phases in an electoral process: the design and drafting of legislation otherwise called the legal framework, the recruitment and training of electoral staff, electoral planning, voter registration, registration of political parties, nomination of parties and candidates, electoral campaign, polling, counting, tabulation of results, declaration of results, resolution of electoral disputes, reporting,

auditing and archiving. Whichever technology to be employed, care must be given to the adoption of technology in a given political system to avoid the risk of compromising transparency and sustainability of any phase of or an entire electoral process.

The impacts of technology in many areas of life have prompted citizens of nations to expect their electoral institutions to keep pace with realities of modern technology. In the United States of America, online voter registration is growing exponentially, from two states in 2008 to over 29 states during the last elections that brought Donald Trump to power (Okonji, 2018). He maintained that when Great Britain launched the option of online registration in March 2015, over two million Britons registered to vote online during the five weeks prior to the deadline for the national elections.

African democracies are in the process of co-ordinating a generation jump in applied technology (Chan, 2017). In Nigeria, the process of casting a ballot has been the marking of a paper ballot with a pen and counting the paper ballots manually. INEC has recently secured an approval from the Nigerian Senate to use the electronic voting system in the 2019 general elections as a means to advance credibility, integrity and legitimacy, ensuring stronger democracy for the country.

Prior to the 2015 general elections in Nigeria INEC had used temporary voter's cards (TVCs) instead of permanent voters' cards (PVCs) to vote at various elections making a recipe for monumental rigging of votes. INEC introduced the use of PVCs for use in the 2015 general elections. The PVCs have many components and specialized features like the base substrate, security printing, personalization, lamination and chip embedding with an average life span of ten years, Ayinde and Idowu (2016). The embedded chip in the PVC contains all the biometrics of a legitimate holder including the fingerprints and facial image.

### **THE VOTER'S CARD READER**

The voter's card reader is a portable electronic device issued by the Independent National Electoral Commission (INEC), configured to read the permanent voter's cards, verify the voters and transmit information to a central database for the purpose of election result collations. The device uses a cryptographic technology that has ultra-low power consumption, with a single core frequency of 1.2GHz and an Android 4.2.2. Operating system (INEC, 2015).

The voter's card reader is designed to read the chip programmed in the PVCs to verify their authenticity and verify the intending voters by matching the biometrics obtained from the voters on the spot with the ones stored on the PVCs (Dahiru, Abdulkadir, Baba, 2015). The voter's card reader also has the ability to keep a tally of the total number of voters accredited at the polling unit and forward it to a central database server over a global system for mobile (GSM) network. It keeps the statistics of the voters' gender for easy collation.

The PVC is placed into a port in the voter's card reader, which then displays the voter's details. When the voter places his/her thumb on the device, and within 10-20 seconds, his/ her identity is confirmed through the fingerprint authentication system except when there are some technical glitches. On completion of the accreditation process, "a close-v" key is used to complete or end the process, while the total number of accredited voters can be previewed using the "query" key. The "communication" key is used to forward results to INEC's central database (INEC, 2015).

## **THEORETICAL FRAMEWORK**

### **The Cybernetics Model of Communications Theory**

This work adopts the Cybernetic Model of Communications Theory

Cybernetics is the branch of science concerned with the study of systems of any nature, which are capable of receiving, storing and processing information to use it for control. The term “cybernetics” was coined by the mathematician Norbert Wiener in 1948 to encompass “the entire field of control and communication theory, whether in the machine or in the animal” (American Society for Cybernetics n.d.). The communications theory was developed through the pioneering research efforts of Norbert Wiener, Louis Couffignal, John von Neumann, McCulloch, W. Ross Ashby, Alan Turing, W. Grey Walter and Karl W. Deutsch. Deutsch introduced the techniques of cybernetics to the sphere of political analysis through his work “The Nerves of Government: Models of Political Communication and Control” which happens to be the first attempt to formulate a fully developed theory of politics based on a communications model. However, it was Wiener’s work: “Cybernetics” that gave the cybernetics model its analytic fervour. Wiener further popularized the social implications of the model, drawing analogies between automatic systems and human institutions in his work, “The Human Use of Human Beings: Cybernetics and Society.”

According to Gauba (2003), “cybernetics is the study of the operation of control and communication systems; it deals both with biological systems and man-made machinery” (p. 98). The term “cybernetics...covers not only the versions of information theory...but the theory of games, self-controlling machines, computers and the physiology of the nervous system” (Varma, 1975, pp. 432-3). “The system codes incoming information, recognizes patterns, stores the patterns in its memory unit, learns from its experience, recalls information on command, recombines information in new patterns, and applies stored information to problem-solving and decision-making” (Winner, 1969, p. 9). Cybernetics theories focus on how systems function, that is to say how they control their actions, how they communicate with other systems or with their own components. According to the wikibooks, the cybernetics theories tend to rest on four basic pillars: circularity, variety, process and observation.

One of the earliest studies on voting decisions where the cybernetics model was applied to is “The American Voter” where Angus Campbell led other researchers to give sophisticated accounts of how computer technology influences electoral processes. In the field of computer technology, cybernetics has become a conceptual relic of communications theory.

The cybernetics model of communications theory has therefore been adopted as a tool for assessing the impact of Information and Communications Technology (ICT), particularly the card reader, in conducting a free, fair and credible election in Nigeria’s General Elections between 2012-2017. The growing complexity of the world has made the use of ICT for administrative purposes a desideratum. The 21st century is described as the “electric” or “jet” age in order to underscore the importance and pervasiveness of computer technology in different spheres of human existence hence; the practice of politics has increasingly involved the use of electronic mass media, mobile telephony and high-speed digital computers. Men, machines, and political units all use and dispose of information

from their environments in essentially the same manner, acting on certain varieties of messages and rejecting others.

Accordingly, Momodu (2014) argues that relying on election rigging is becoming obsolete and increasingly difficult as social media and mobile telephony are breaking down those walls that aided electoral malfeasance in the recent past. As an activity in which men and machines are involved hand-in-circuit, it is not surprising that the cybernetics model should become plausible as a basis for understanding the use of technology in electoral process.

## **EMPERICAL REVIEW**

### **THE BACKGROUND OF THE USE OF THE VOTER'S CARD READER**

The voter's card reader is an electronic device used during the accreditation of voters for the purpose on an election. According to Golden, Kramon & Ofosu (2014, p.1), "these technological solutions, such as electronic voting machines, polling station webcams and biometric identification equipment, offer the promise of rapid, accurate, and ostensibly tamper-proof innovations that are expected to reduce fraud in the processes of registration, voting or vote count aggregation". Biometric identification machines authenticate the identity of voters using biometric markers, such as fingerprints, that are almost impossible to counterfeit.

Nigeria's quest for e-voting started in the Second Republic when the Chairman of the defunct Federal Electoral Commission (FEDECO), late Justice Victor Ovie-Whiskey, mooted the idea for the 1983 elections. The motion was however, opposed by the then leader of the defunct Unity Party of Nigeria (UPN) late Chief Obafemi Awolowo, who threatened to mobilise his supporters to smash the machines. In 2006, when the former INEC Chairman Prof. Maurice Iwu proposed the e-voting for the 2007 elections, it was still greeted with criticism. According to Salaudeen (2013), the pan-Yoruba socio-political group, Afenifere, rejected the method saying that the country was not ripe for it. Salaudeen (2013) noted that Anifere cited low literacy level and lack of time to ascertain its workability as an excuse to their objection to e-voting. Besides, the organization alleged that Iwu had a hidden agenda and if the proposal were approved, would serve as a rigging mechanism for him. Some politicians especially from the north opposed the idea of PVC on the ground that it offended their culture and religion, but the INEC Chairman Prof. Iwu swayed them when he informed them that if they had no objection having photographs on their international passports, then there was no cogent reason to oppose such procedure in the new voter's card. Prof. Iwu's proposal was however, dismissed by the Senate with one of the reasons being the low literacy level of Nigeria's voting population. Nigeria witnessed the first use of biometric registration in 2007 general elections. However, there was no electronic verification during accreditation and voters were issued with TVCs for use at the elections. According to Suberu (2007), the election turned out to be very controversial with some scholars and observers describing it as the worst election in the annals of general elections in the country.

On the June 8<sup>th</sup> 2010, Prof. Attahiru Jega was nominated by the then President Goodluck Jonathan as the new INEC Chairman subject to Senate confirmation as a replacement for Prof. Maurice Iwu who vacated office on 28<sup>th</sup> April 2010 at the expiration

of his term. Prof. Jega continued with the pursuit for electronic voting with the first step of conducting a fresh voter's registration using electronic data capturing system of registration. With the approval of the electronic data capturing system of registration by the Senate in 2010, INEC embarked on the purchase and deployment of 120,000 composite electronic voter registration equipment, principally laptop computers, fingerprint scanners, high resolution cameras, backup power packs and integrated printers for producing temporary but high quality voters cards that can be used for the proposed January 2011 general elections. With the fresh biometric voters' registration exercise in 2010 there has been continuous voter registration exercise going on in INEC to update the register for the purpose of including persons who recently attained the age of 18 or who did not register previously. After the 2011 general elections, there were claims and counter claims of exclusion by prospective voters while the voter turnout could not reconcile with the number of registered voters because the voters' register was oversubscribed with fictive and non-existent persons/names. This experience drove INEC to the determination of using PVCs and voters' card readers to improve the process.

To demonstrate the operation of the card readers for accreditation, INEC organised a test trial of the proposed card readers in twelve states. With about 90% success rate from the test trial of the voter's card reader on March 7<sup>th</sup> 2015, the Senate approved the use of the voters' card readers for accreditation in the general elections and the use of PVCs only for accreditation and voting. Although the public outcry that greeted the planned use of the card reader was enough to discourage INEC from using it in the general elections, INEC had confidence in the efficacy of modern technology in achieving quick result coupled with its vision to transform the country's electoral process from its archaic norms characterized by ballot box snatching and multiplicity of ballot tomb printing, and went ahead of INEC in the use of the voter's card reader machine for the general election, some challenges were inevitably apparent, though the election was still adjudged by domestic and international observers as being the best in Nigeria so far. to use the technology, against all hitches (Nnorom, 2015). However, despite the confidence

**THE USEFULNESS OF THE VOTER'S CARD READER IN THE NIGERIA'S GENERAL ELECTION**  
The main use of the voter's card reader is to verify PVCs and voters who are eligible to vote and keep an electronic record of the particulars of those accredited to vote. While appraising the INEC smart card reader, John (2015) avers that "the card reader shall store the VIN of the scanned card and the accreditation status – successful or failed, after which the device shall show the total number of accreditation at the press of a single button and transmits the total number of accredited voters to a central server". The following statements by Prof. Jega while addressing the press shortly after the interactive session with Senators at the National Assembly, Abuja were extracted from the Vanguard (2015) in support of the use of the voter's card reader:

"An election is said to be validly conducted if it meets certain basic requirements, including accreditation of voters."

"The use of card reader for the purpose of accreditation of voters is one of the innovations introduced by the Commission to improve the credibility of the electoral process." (INEC Frequently Asked Questions n.d.)



“It is not offensive to the Electoral Act or to the 1999 Constitution. It adds value to the desires of Nigerians to have a credible election in line with International Best Practice.”

“Although Section 52 of the Electoral Act prohibits the use of electronic voting, the card reader is not a voting machine; it is only an electronic machine introduced to improve the integrity of the voting process.”

According to a press release by Idowu (2015), the Chief Press Secretary to INEC Chairman, the decision to deploy SCRs for the 2015 General Elections, have four main objectives.

- i. To verify PVCs presented by voters at polling units and ensure that they are genuine, INEC-issued (not cloned) cards.
- ii. To biometrically authenticate the person who presents PVC at the polling unit and ensure that he/she is the legitimate holder of the card. In this regard, there were a few issues in some states during the public demonstration. Overall, 59% of voters who turned out for the demonstration had their fingerprints successfully authenticated.
- iii. To provide disaggregated data of accredited voters in male/female and elderly/youth categories— a disaggregation that is vital for research and planning purposes, but which INEC until now had been unable to achieve. The demonstration fully served this objective.
- i. To send the data of all accredited voters to INEC’s central server, equipping the Commission to be able to audit figures subsequently filed by polling officials at the polling units and, thereby, be able to determine if fraudulent alterations were made. The public demonstration also succeeded wholly in this regard (<http://inecnigeria.org/inecnews>).

Prof. Jega had on many occasions observed that the use of the voter’s card readers would increase the credibility of the election process because of its numerous advantages. Some advantages of the voter’s card reader include:

- a. Once the card reader is configured, it can only read PVCs issued by INEC at the polling units that it has been configured for. This means that the indiscriminate use of PVCs for voting in multiple polling units and the use of fake PVCs is eliminated from the process.
- b. It reads the embedded chip card rather than the barcode, which enables authentication of the identity of the voter by matching his or her fingerprint with that on the chip of the card; this guards against impersonation.
- c. The voter’s card reader keeps tally of all cards read and of all voters verified with their details, including the time of verification. The voter’s card reader therefore facilitates the electronic documentation of voter statistics.
- d. Information from the voter’s card reader is sent to a central server from polling units. This promotes better collation and audit of election results.
- e. It helps in the statistical analysis of the demographics of voting, something INEC had not been able to do effectively.

- f. The ward collation officer uses the information on the voter's card reader to audit polling unit result sheets and determine whether accreditation figures have been altered; a common feature of electoral fraud in our jurisdiction.
- g. The voter's card reader has the capacity to prevent or minimize electoral malpractice by preventing multiple accreditation or impersonation and ensuring that the election officials do not go out of the way to bloat voting scores beyond the number of voters accredited.

#### THE IMPACT OF ELECTRONIC CARD READER ON THE NIGERIA'S 2015 GENERAL ELECTIONS:

The adoption of the card reader was one of the initiatives of INEC to arrest the inflation of voter roll in the country. At the end of the voter registration exercise in 2011, the Commission claimed that 73 million Nigerians had registered, out of which the Automated Fingerprint Identification System (AFIS) had removed 800,000 persons for double registration (Aziken, 2015). This was the first time in the history of Nigeria that details of double registrants were removed from the voter's register, and considering that a credible election begins with a credible voter registration with a valid identification for the election, the registration exercise was pertinent for the upcoming 2015 General Elections. Professor Jega noted that INEC did not see the need for an amendment of the Electoral Act to accommodate the use of the card reader and that the Commission would not revert to manual accreditation of voters during the elections nor will it use the Temporary Voter's Card (TVC) for the elections. The impact of the voter's card reader will be assessed in different sub headings:

##### 2015 General Election and Voter Turnout

Despite the enthusiasm in the air on how to embrace and cope with the use of an electronic device for accreditation, the voter turnout for the General Elections was poor when compared to the last two General Elections. Table A. below shows the voter turnout in the 2015 Presidential election:

		% of Registered Voters
No. of Valid Votes	28,587,564	42.40%
No. of Rejected Votes	844,519	1.25%
No. of Votes Cast	29,432,083	43.65%
No. of Accredited Voters	31,746,490	47.08%
No. of Registered Voters	67,422,005	

Source: [inec.gov.ng/](http://inec.gov.ng/)

The voter turnout is the percentage of registered voters who actually voted. Studies have identified some causes of low voter turnout, which might affect elections, namely: difficulties of registering and of voting, voter fatigue, negative campaigning (Niemi and Weisberg, 1998; Krupnikov, 2011), security lapses leading to fear by voters, etc. The 2015 General Elections suffered these lapses in varying degrees. While 31,746,490 voters were accredited, only 29,432,083 actually stayed to vote. The table below shows a comparison of voter turnout between 2007-2015 general elections.

Table B: 2007, 2011, and 2015 General Elections figures compared:

Year	Voter Turnout	Total Vote	Registration	VAP Turnout	Voting Age Population	Population	Invalid Votes
2015	43.65%	29,432,083	67,422,005	32.11%	91,669,056	181,562,056	2.8%
2011	53.68%	39,469,484	73,528,040	48.32%	81,691,751	155,215,573	3.19%
2007	57.49%	35,397,517	61,567,036	49.85%	71,005,507	131,859,731	

Source: International IDEA: <http://www.idea.int/vt/countryview.cfm?CountryCode=NG>

Note: VAP means Voting Age Population.

Information from the above table shows that Nigeria witnessed a low turnout in the 2015 General Elections as the voter turnout in percentage is lowest in the table above. The use of the card reader slowed down the accreditation process, as the fingerprint scanners of many were faulty. This led to the election exercise extending to the next day at several polling units and some voters who did not have the patience to wait had to leave without accreditation and voting. No wonder the former President Goodluck Jonathan having stood for over 30 minutes as the card reader malfunctioned urged Nigerians to be patient with the process as the election is one that the world is looking up to. According to Sotubo (2015) while reporting on the then President's accreditation, "three card readers failed to work, but a fourth was produced and began working". Some voters were not willing to make the sacrifice of waiting for too long and left without being accredited while some were accredited but could not wait behind to vote when accreditation was over.

#### 2015 General Election and its Credibility

While the use of the biometric technologies did not entirely make the elections free and fair, they however, accounted for their credibility. The credibility of the elections, arising from the use of the anti-rigging technology, is also deducible from the fact that it is the first time in the electoral annals of Nigeria that many candidates would concede defeat and call to congratulate the winners. This happened first at the national level when President Goodluck Jonathan called to congratulate General Muhammadu Buhari on March 31, 2015. This exemplary conduct was emulated by defeated PDP governorship candidates in Niger, Benue, Adamawa, Lagos, Kaduna and Oyo States. It was also the first time so many incumbent governors would lose their senatorial ambitions to opposition party candidates. This happened in Adamawa, Bauchi, Benue, Niger and Kebbi States.

Arising from the Election Observation Missions (EOMs) unanimous acclamation of the outcome of the 2015 General Elections, these international development partners not only repose more confidence in INEC and Nigeria's elections but also are keener to collaborate with the Commission in order to ensure that future elections in the country are truly free, fair and credible. Moreover, the goodwill gesture of some of these development partners to Nigeria has been demonstrated through the request of the Group of Seven (G-7) most industrialized countries asking General Muhammadu Buhari to prepare a "wish list"

and come with it for its consideration during its 41st Summit held between June 7 and 8, 2015 in Bavaria. Thus, the Outreach Programme for invited heads of government and global institutions offered President Buhari the opportunity to meet with Angela Merkel, Barack Obama, Francois Hollande, David Cameron, Stephen Harper, Shinzo Abe, Jim Yong Kim, Ban Ki Moon, Angel Gurría, Christine Lagarde and Guy Rider of Germany, USA, France, UK, Canada, Japan, the World Bank Group, the United Nations, the Organization for Economic Cooperation and Development, the International Monetary Fund and the International Labour Organization respectively. This gesture is a demonstration of these partners' confidence in the electoral process that produced the present government in Nigeria.

Acknowledging the success of the general elections, Election Observation Missions (EOMs) of the Commonwealth, the African Union (AU) and Economic Community Of West African States (ECOWAS), accredited domestic and international EOMs unanimously described the elections as peaceful, transparent and generally credible (Nwanwgu, 2015). Among others, the observers attributed the credibility of the elections to INEC's insistence on the use of the PVCs and SCR.

#### The 2015 General Election and Election Petitions

The 2015 elections have witnessed a general reduction in election litigations. The total number of petitions filed after the 2003 General Elections was 560. By 2007, the petitions increased to 3000. 733 elections petitions were filed at the various Election Petition Tribunals across the Federation after the 2011 General Elections. Unlike in the 1999, 2003, 2007 and 2011 elections, there have not been avalanche of electoral petitions in 2015. The governorship, NASS and SASS petitions filed at the tribunals in Abia, Akwa-Ibom, Delta, Ebonyi, Imo, Rivers, Taraba, among others, were due to the general failure or non-use of the voter's card readers for accreditation and PVC authentication in these areas.

Most of the candidates that lost in the 2015 general elections did not challenge the outcome; rather some accepted defeat in good faith and congratulated the winners. For instance, the presidential candidate of the PDP, Goodluck Jonathan congratulated the APC presidential candidate Muhammadu Buhari who emerged the winner of the election. This behaviour cut across states of the federation in the other positions contested in the elections.

According to the INEC Chairman Prof. Yakubu Mahmood, INEC was made party to 680 cases filed by the various political parties at the end of the 2015 elections and with this, the 2015 general elections so far has the least petitions ever (INEC, 2015). This has been attributed to the transparency created by the use of the card reader for accreditation. Besides, electoral conflicts and violence was minimal as the election was seen to be transparent and credible due to the use of the card reader (Odiakose, 2015).

#### **FINDINGS**

INEC used the voter's card reader for the first time in the 2015 general election. This novel introduction is an attestation that the country is gradually transiting from manual processes to infusing technology into its voting processes and election culture. This paper analysed the impact of voter's card reader on Nigeria's general elections. It acknowledged the positive contributions the voter's card readers have offered the electoral process in

Nigeria between 2012 to 2017 and the shortcomings experienced by the use of the device. The following findings were made:

1. The deployment of voter's card readers for the purpose of accreditation is technologically innovative and has rekindled the confidence of many Nigerian voters along with that of development partners in INEC due to improved credibility ratings with Nigeria's last general elections.
2. Reports from many accredited observers and media organizations as well as domestic and international observers all confirm that the 2015 general elections were more credible than the previous elections in Nigeria.
3. Although the card reader device experienced some glitches in its operation, it curbed electoral rigging to a reasonable extent and largely accounts for the significant drop in the volume of election petitions filed by aggrieved candidates and political parties when compared with that of previous general elections. This is due to the difficulty in double voting and impersonation. More so, evidence provided by the device on number of accredited voters, cannot be short of the votes cast.
4. The usefulness of the voter's card reader for accreditation and collation of election results cannot be over emphasised. It has restored dignity and credibility to the electoral process.
5. The reliability of the device during a general election is not assured as the use of manual accreditation to supplement for accreditation where the card reader fails still lingers after two years of introducing the technology in Nigeria's electoral system. The Nigerian Senate has however banned the use of manual accreditation and approved the use of full biometric accreditation using the smart card reader from the next general election in 2019. If the issue of card reader failure is not resolved by then, the election credible ratings may drop.
6. The voter's card reader has made a great impact in Nigeria's electoral process and has resulted to the reduced election litigations and increased credibility ratings of elections by IFES, international and domestic observers, organizations and stakeholders.
7. However, the failure rate of the voter's card readers in verifying the identities of the owners and incompetency of election officials responsible for the card readers caused delay to the process, which led INEC to authorize the use of manual accreditation to complete accreditation where the card reader would not work properly. This arrangement was to ensure that no person was disenfranchised due to a faulty or slow card reader operation.
8. The difference in the number of voter turnout, accredited voters and votes cast has been attributed to the stress and delays in the use of the card readers, as voters had to remain at the polling units long after their accreditation before voting commenced.

The introduction of an electronic based voter register and the deployment of voter's card readers for elections in Nigeria is a giant step in the drive to reform the nation's electoral process.



## **RECOMMENDATIONS**

From the foregoing discussions and findings, the study recommends as follows:

1. INEC should improve the quality of the PVCs issued to voters to prevent the possibilities of obsolescence of cards used by the card readers. This is because, during the last general election several PVCs were already defaced and information on them unreadable.
2. Training of election officials for expertise in handling the card readers is highly recommended. Considering that minor issues such as non-removal of thin film from device lenses could disrupt accreditation, effort should be intensified in giving election officials the much-needed training to efficiently and effectively operate the voter's card.
3. INEC should improve the software and technology of the voter's card reader to avoid the glitches so far experienced with the card readers reoccurring in subsequent elections. The past general elections reveal that technology has shown its merit in Nigeria's electoral process and therefore should be improved for better and newer features.
4. There should be enough spare voters' card readers and batteries to go round the polling units for use should in case the card reader in use fails.
5. Biometric verification does not curb illegitimate registration wherein persons below the age of 18 are registered. In addition, INEC Automated Fingerprint Identification System (AFIS) has not functioned optimally in dictating double registrants. This has accounted for people owning and holding multiple PVCs. It is recommended that INEC upgrade AFIS software to dictate and eliminate all double registrants. A technology capable of rejecting under-aged persons at the point of registration should be developed in order to check irregularities throughout the electoral cycle.
6. Further studies should be undertaken to study the prospects of modernization of Nigeria's electoral process through technology especially in the area of the voter's card readers, PVCs and ways of curbing technical challenges arising therefrom.

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