



## 5TH INTERNATIONAL CONFERENCE ON SUSTAINABLE DEVELOPMENT STRATEGIES IN AFRICA

Theme:  
**Regional Cooperation and Sustainable  
Development Strategies in Africa**

# CONFERENCE PROCEEDINGS

**4TH - 5TH NOVEMBER, 2019**  
UNIVERSITY OF GHANA, ACCRA

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## **5TH INTERNATIONAL CONFERENCE ON SUSTAINABLE DEVELOPMENT STRATEGIES IN AFRICA**

### **THEME**

Regional Cooperation and Sustainable Development Strategies in Africa

### **OBJECTIVE**

The conference provides ideal opportunity for research experts in the academia, government, business, the technical community and civil society to consider broad social, economic, environmental, and technical trends, shaping the development of the African economy and to discuss policies that could respond to evolving societal needs.

**DATE:** 4th - 5th November, 2019

**VENUE:** Institute of African Studies, University of Ghana, Accra

**TIME:** 9:00am

### **CONFERENCE TECHNICAL PANEL**

#### **Professor Ravindra Kumar**

*Former Vice Chancellor*

*Ombudsman, Swami Vivekanand Subharati University  
Meerut, India*

#### **PT. Hussein Botchway**

*Director, OCISP*

*Korle Bu Teaching Hospital  
Accra Ghana*

#### **Dr. Ismalia Ceesay**

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## CONFERENCE PROGRAMME

### DAY ONE – Sunday 3rd November, 2019

Arrival of Guest/Conferees/Delegates

### DAY TWO – Monday 4th November, 2019

#### OPENING SESSION/PLENARY

Conference Registration	- 9:00am – 10:00am
Opening Prayer/Welcome Remark	- 10:00am – 10:15am
Institutional Brief/Chairman's Opening Remark	- 10:15am – 10:45am
Plenary Session	- 10:45am – 12noon
Launch Break/Group Photograph	- 12noon – 1:30pm
Plenary Session	- 1:30pm – 4:00pm
Policy Review Session	- 4:00pm – 5:00pm

### DAY THREE – Tuesday 5th November, 2019

Breakfast	- 8:00am – 9:00am
Conference Briefing	- 9:00am – 11:00am
Plenary Session	- 11:00am – 2:00pm
Launch Break/Group Photograph	- 2:00pm – 3:30pm
Communiqué/Closing Ceremony	- 3:30pm – 5:00pm

### DAY FOUR – Wednesday 6th November, 2019

Departure of Guest/Conferee/Delegates



**WELCOME TO  
UNIVERSITY OF GHANA**

The University of Ghana was founded in 1948 as the University College of the Gold Coast on the recommendation of the Asquith Commission, on Higher Education in the then British colonies. The Asquith Commission, which was set up in 1943 to investigate Higher Education, recommended among other things, the setting up of University Colleges in association with the University of London. This was followed up by a number of separate Commissions in different regions. The West Africa Commission was under the Chairmanship of the Rt. Hon. Walter Elliot.

The Elliot Commission published a majority report which recommended the establishment of two University Colleges in the Gold Coast (Ghana) and Nigeria, and a minority report which held that only one University College for the whole of British West Africa was feasible. The British Government at first accepted the minority report of the Elliot Commission and decided that a University College for the whole of British West Africa should be established at Ibadan in Nigeria. But the people of the Gold Coast could not accept this recommendation. Led by the scholar and politician, the late Dr. J.B. Danquah, they urged the Gold Coast Government to inform the British Government that the Gold Coast could support a University College. The British Government accordingly reviewed its decision and agreed to the establishment of the University College of the Gold Coast.

As the leading university in Ghana, the University aims to produce the next generation of thought leaders to drive national development. Through our research institutes and other centres of learning and research, faculty members are involved in studies that support policy making for national development, often in collaboration with other international institutions.

There are currently a number of Ghanaian and international institutions that hold affiliation with the University of Ghana. As a leader in tertiary education, the University has established several link agreements with universities in Africa, Europe and North America for student, faculty and staff exchange as well as collaborative research.

The University of Ghana, has over the years built an image as one of the continent's reputable universities which makes the University of Ghana the first choice for academics, researchers and students.

<https://www.ug.edu.gh/content/establishment-university>



## About Us

The International Institute for Policy Review and Development Strategies (IIPRDS), Nigeria is a member of First Assured Brilliant Intl Limited, incorporated under the Companies & Allied Matters ACT of the Federal Republic of Nigeria. The Institute is a non-partisan organization, independent of government and other bodies. Since incorporated in 2013, IIPRDS has made significant contributions in quality research and international standard publications.

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To be the world's leading research and publishing Institute on policy review and development strategies. Through independent, collaborative and institutional research, review existing development policies especially in developing economies of the world, research into evidence-based strategies to advance new measures for achieving sustainable development.

## Research Focus & Publication

IIPRDS has organized several international research conferences and published proceedings in International multi-disciplinary journals indexed and domiciled in reputable Universities. Special issues are published in the African Development Charter series; a strategic economic and policy blueprint for Africa development.

IIPRDS international journals are published and indexed in 3 directories;

1. Science Publishing Corporation (SPC) Germany
2. International Scientific Research Consortium (ISRC) United Kingdom and
3. International Journals of Advanced Scientific Research (IJASR), Nigeria, Nairobi, Ghana and Tanzania. IJASR are online international open access peer review scholarly journals. Click this links for published Journals:

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The Institute currently operates an Exchange of Idea Initiative (EII) with other International Research Organizations and Libraries to enhance wider researcher of its journals. With this initiative, Academic Journals are published in various Countries by reputable publishers and research organizations not minding where the conference is held. This dynamism has diversified and improved the quality of the Institute Journals, enhanced International acceptance by indexing research agencies, built confidence in conferees and enhanced their disciplinary relevance.

**We conduct our work with strict independence, objectivity, and non-partisanship.**

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## COMMUNIQUE OF THE 5TH INTERNATIONAL CONFERENCE ON SUSTAINABLE DEVELOPMENT STRATEGIES IN AFRICA, UNIVERSITY OF GHANA, ACCRA

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### Preamble

The goals of Sustainable Development Strategies in Africa is and will continue to be a matter of substantial international interest and concern. Developments achieved over the past years in most African countries have been substantial, but there are still many gaps and need which need to be met so as to improve its prospects in the next two decades. To examine the challenges in the goals of sustainable development strategies, the African Research Council for Sustainable Development and International Institute for Policy Review and Development Strategies (IIPRDS) hosted the “5th International Conference on Sustainable Development Strategies in Africa”. The conference was held from 4th to 5th November, 2019 in The Balme Library, University of Ghana, Accra. The theme of the conference was “Regional Cooperation and Sustainable Development Strategies in Africa”

The two-day conference provided an ideal opportunity for research experts in the academia, government, business, technical community and civil society to consider broad social, economic, environmental, and technical trends, shaping the development of the African economy and which they discussed policies that could respond to evolving societal needs.

### Discussion

Issues discussed in the conference were broad based. The discussion was led by the Director of the Institute and other members of the International panel.

### Participants raised the following issues:

#### Security:

1. The security situation in Africa has become enormous and embarrassing to government and the society.
2. There are barriers affecting sustainable coexistence of the African state which makes it difficult to tackle the menace of insurgency.
3. Herders-farmer’s conflicts might lead to national disintegration.

#### Industrialization:

1. Multinational Corporations in Nigeria particularly, Shell Petroleum Development Company (SPDC) does not help development in Nigeria

2. Privately established and managed export oriented Conventional Crude Oil Refinery could create employment to the tune of ten thousand (10,000) workers, which could reduce unemployment in Nigeria.

**Economy:**

1. The global economic crisis worsened the state of affairs culminating in the collapse of many companies.

**Mass Media:**

1. The Mass media should have very important role to play in the economic development of the society, because of its major power of reinforcing economic development.

**Education:**

1. Pre Service teachers in Science Education should acquire entrepreneurial skills opportunities available in Biological science.
2. Lecturers in Business Education in Colleges of Education in the sampled area have low proficiency in the use of Power Point, whereas they are proficient in the use of Microsoft excel.
3. Islamic Movements do not have the characteristics of Islamic Movements and do not operate on the basis of teachings of Islam therefore, they are not representing Islam
4. Most secretaries (professional or otherwise) are not being fully utilized in the aspect of the procedure for handling minutes of meetings in offices, especially in the writer's institution.

**Agriculture:**

1. How well will the direction of causality between agricultural sector help the economic performance in Nigeria

**Conference Resolutions**

**Security:**

- 1(a). Government should increase the number of well-trained personal and provide them with modern equipment in order to curb the menace of insecurity towards ensuring coexistence of the African state.
- 1(b). There should be periodic seminars and workshops for security personal and the general public to enrich their knowledge and learn new ideas on the modern techniques of combating insecurity as it will be among the ways of ensuring sustainable coexistence of the African state.

2. Mainstreaming value exchange in social marketing campaigns should advance a symbiotic relationship between the warring factions and an enhanced synergy among security agencies to bring menace to a halt, and employing social marketing principles can curtail the clashes between herders and farmers in Nigeria and other problem-behaviours.
3. Herders-farmer's threat needs political solution, therefore; the Nigerian political leaders should lead by example in demonstrating political will.

**Industrialization:**

1. The Nigerian government should go back to the drawing board and take a critical review of the activities of Shell Petroleum Development Company (SPDC) in Nigeria to agree with the development challenges facing the country especially in the host communities.
2. The government should have a major role to play through appropriate policy implementation towards encouraging industrialization in the country.

**Economy:**

1. There should be interplay of fiscal and monetary policy instruments in achieving the desired macroeconomic goals through industrialization.

**Mass Media**

- 1(a). Government should take advantage of the effectiveness of mass media to bring about economic development in the society, and mass media on the other hand should make their economic development programs filled with adequate information, creativity, and innovation.
- 1(b). Companies in Nigeria should be compelled by government to venture more into online advertising because of its interactive nature and the rapid growth of the world standardized advertisement platform.

**Education:**

1. The teaching of these skills should be part of the college curriculum and must be taught to teachers to be, in addition to the theoretical aspect. Government should also allocate enough fund to these colleges so that the new innovation could be sustained especially in any field of Science Education.
- 2(a). Business Education lecturers should ensure that their students are taught the rudiments of e-visual skills to enhance their self-reliance capacity.
- 2(b). Business Education students should be sensitized that their intellectual capacity rather than their institution ownership is the catalyst for stimulating their performance or excellence in the world of work.



- 2(c). Institution owners should encourage new discovery with high potentials for lecturers in Business Education and also ensure that the programme is fully funded.
3. Basic education generates substantial positive benefits to the student themselves in particular and the society in general.
4. Professional secretaries should be given the opportunities to exercise their skills in the field of taking minutes in meetings, so as to enable them become fully integrated in their organizations or section, duties or departments in the institution.

**Agriculture:**

1. Nigeria should focus on promoting agricultural sector, create an enabling environment and formulate policies that will motivate Nigerians to invest in agricultural sector.

**Conclusion**

The conference submitted that sustainable development is an important opportunity to improve the quality of life for all humans and the planet. With Strategic Implementation Framework on SDGs, there is optimism that the goals can be achieved.

**Signed,**

Professor Ravindra Kumar

**Former Vice Chancellor**

*Ombudsman, Swami Vivekanand,*

*Subharati university, Meerut, India*

**Dr. Bassey Anam**

*Institute of Public Policy & Administration*

*University of Calabar*

**PT. Hussein Botchway**

*Director, Directorate of Policy and Research, IIPRDS*

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*Book of*  
*Proceedings*

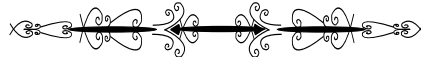
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# BIOCLIMATIC DESIGN STRATEGIES FOR RESIDENTIAL BUILDINGS IN WARM HUMID TROPICAL CLIMATE OF ENUGU, NIGERIA

<sup>1</sup>Nnaemeka-Okeke R.C, <sup>2</sup>Okeke F.O, <sup>3</sup>Okwuosa C.C & <sup>4</sup>Sam-Amobi C

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## **Abstract**

*A Bioclimatic designed building responds to the climatic conditions within its environment as they are modified with appropriate design strategies to create a conducive environment that provides thermal and visual comforts to its users at the lowest energy consumption. The study is carried out to review bioclimatic design strategies for residential buildings in a warm humid climate of Enugu using the Psychrometric chart adapted from Giovanni to analyze the climate of the study area and identify the bioclimatic design strategy that will aid energy efficiency. The research methodology adopted is a review of existing literature for warm humid climate and finally a proposal that can be applied to residential building design in Enugu was developed. This study helps us conclude that some bioclimatic design strategies can be used in countries with similar climates and therefore, advocates for more incorporation of bioclimatic design strategies for energy efficient buildings.*

**Keywords:** *Bioclimatic design strategies, Energy Efficiency, Residential Buildings, Warm Humid Climate*

## **Introduction**

Bioclimatic architecture is defined as a design that has a connection with nature. It considers the climate and environmental conditions to favor the thermal comfort of users [1]. There is integration between the design and natural elements; the sun, wind, rain and vegetation, which optimizes resources. A bioclimatic design considers climate and environmental conditions to help achieve optimal thermal comfort indoors [2]. It was coined by the Olgyays in the early 1960s. The bioclimatic design approach could be simply described as architecture design methods that takes advantage of the climate through the right application of design elements and building technology for energy savings, as well as to ensure comfortable conditions in buildings [3]. It refers to the study of climate when applied to Architecture, in order to improve the conditions of thermal comfort of the occupants using

appropriate design strategies, which differs from place to place based on the prevailing climate of that place. Researchers have identified that buildings are responsible for approximately 40% of the total world annual energy consumption of which most of the energy consumed is for the provision of lighting, heating, cooling, and air conditioning (HVAC). The heating and cooling of a space to maintain thermal comfort are an energy intensive process that represents up to 60–70% of the total energy consumption in non-industrial buildings [4]. In Nigeria, energy consumed by residential buildings accounts for more than 50% of the total energy consumed in the country [5]. Hence, the concept of green development through bioclimatic building designs.

### **Problem Definition**

Nowadays, Architects design buildings using the principles of sustainable design [6]. But there is a challenge in integrating climate control and building functionality to achieve thermal comfort in the environment while reducing the effect of solar radiation, wind, and rain. Many architects do not integrate the bioclimatic approach into their designs because of their lack of confidence [7]. This is because of their notion that the integration of bioclimatic design requires the knowledge of “green technology”. Other architects complete the design process before passing the whole scheme to the engineers. Therefore, a study of bioclimatic architecture will expose them to the bioclimatic design strategies [8].

### **Aim and Objectives of study**

The aim of the research is to study bioclimatic principles and their application in the design of residential buildings in a warm humid climate in order to achieve adequate thermal comfort of occupants, with specific objectives as follows:

- i. To review the concept and principles of bioclimatic designs.
- ii. To analyze various Bioclimatic Principles and their individual application
- iii. To relate bioclimatic principles to building design in a warm-humid zone.
- iv. To propose a framework that will be adopted for residential buildings in Enugu.

### **Bioclimatic Design Strategies**

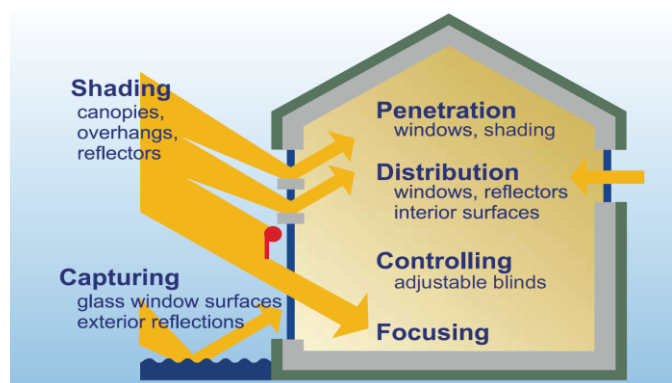
The principle behind bioclimatic design is the understanding of the climatic factors of a site by analyzing the influence of microclimate; including solar radiation, sunshine, temperature, humidity, rainfall, wind velocity and direction [9]. Bioclimatic structures are constructed in such a way that, during winter months, exposure to cold temperatures is minimized and solar gains are maximized; during the summer, bioclimatic structures are shaded from the sun and various cooling techniques are employed, often with the aid of renewable energy sources [10].

### **Natural Lighting Strategy**

The natural lighting strategy aims to improve how natural light is captured and allowed to penetrate a building and enhance how it is then diffused and focused [2]. The Control of light



to avoid visual discomfort therefore must be considered because excessive natural light penetration can cause visual discomfort and glare which can be controlled by constructing fixed architectural features such as overhangs, roof lights or light-shelves, roof eaves, etc. in conjunction with adjustable screens (awnings, shutters, louvre-shutters or blinds) as illustrated in figure 1. The intelligent use of natural light enables the reduction of electricity consumption for lighting. Lateral lighting provides a directed light that highlights outlines but is limited in depth, unlike top lighting which is more uniform but possible only on the top floor of buildings.



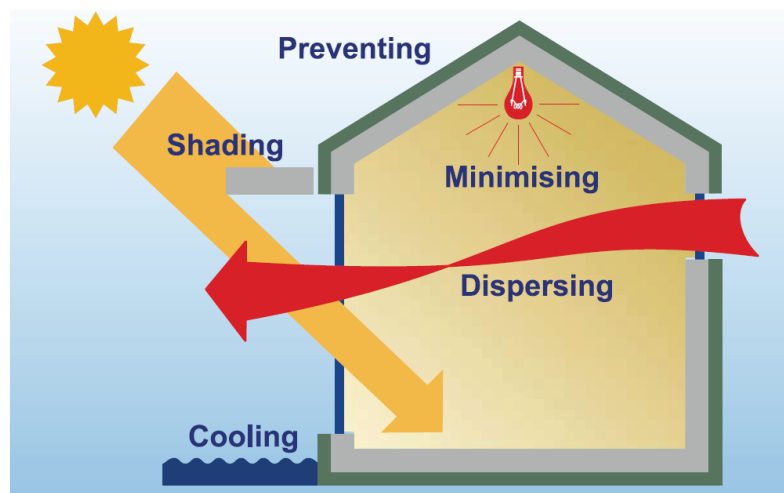
**Figure 1:** Strategies to Control the Entry of Natural Light

**Source:** Liebard et al, 2005.

The amount of light captured in a room depends on the position, orientation, angle, size, nature and the type of glazing surface, its roughness and thickness. The construction of the window surrounds may also create a barrier to direct sunlight into the building while reflective ground surfaces like paving or swimming pool may contribute to capturing more light. The way light penetrates a building creates very diverse lighting effects and depends on the type of sky, atmospheric disturbances, season, time of day, and how open the site is.

### Cooling Strategy

Cooling strategy is a response to the need for thermal comfort. This can be achieved by shading from solar radiation and heat gain, minimizing internal heat sources, dissipating excess heat and cooling down naturally. The minimizing of internal heat sources is aimed at avoiding excessive heat in buildings due to the occupants and their equipment.



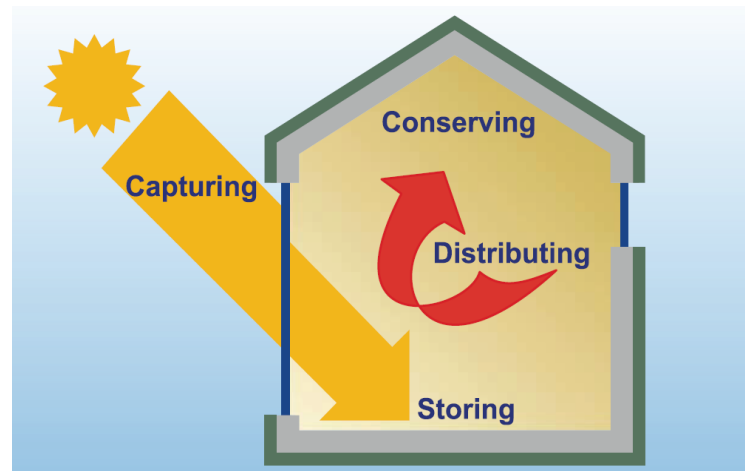
**Figure 2:** Strategies for Cooling in Buildings

**Source:** Liebard et al, 2005.

Shading are required to shield the building openings from direct sunlight in order to limit direct heat by using screens, window hood or fins also shown in figure 2. Also, walls can be prevented from heating up by insulation. Cooling in buildings can easily be achieved by natural means of ensuring good ventilation (especially at night, in order to eliminate heat stored up during the day) or to increase the speed of air circulation (the Venturi effect, wind towers, etc.). Other means of cooling is by using water features like fountains and swimming pool, trees, landscape and underground ducting,

### **The Heating Strategy**

The heating strategy is a response to winter comfort. Heat is captured from solar radiation and stored in the mass of the building. It is then retained and distributed around the building. The solar radiation received by a building depends on the climate with its daily and seasonal variations, the orientation of the building, the nature of its surfaces and the materials used, on the topography of the site, on shade, etc.



**Figure 3:** The Heating Strategy

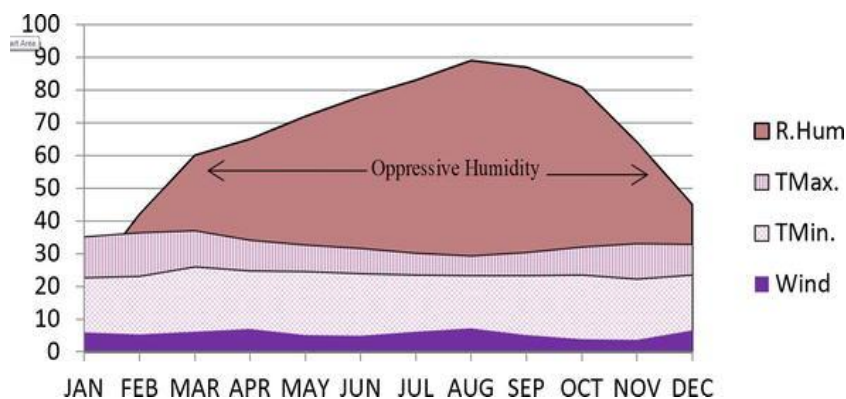
**Source:** Liebard et al, 2005.

Solar radiation is only useful in practice when at right- angles to glazed surfaces, by which it is partly transmitted into the inner space and provides a direct heat gain. Solar radiation often produces heat when not needed. It is therefore useful to be able to store heat until it is needed. This storage takes place within all types of material according to their capacity to accumulate heat. Distributing heat around a building whilst regulating it means conveying it to the different living spaces where it is desired. This distribution can be carried out naturally when the heat accumulated in materials during periods of sun is released back into the ambient air by radiation and convection.

### Study area

Enugu is a city in south-eastern Nigeria, located at 6.26° north and 7.29° east. The climatic data of Enugu as shown in figure 4 can be classified as tropic rain forest. Enugu covers a total area of 215 sq mi (556 km<sup>2</sup>) with a population Density of 3,400/sq mi (1,300/km<sup>2</sup>). Located in the basin of the Cross River and the Benue Trough, it has the best developed coal in Nigeria.

The city is on an altitude of 304.7 m above sea level, its climate is naturally humid, and this humidity is high between March and November [11]. Its average maximum temperature stands at 34.9°C, with average lows of about 22.3°C and its annual mean temperature is about 26.7°C [11].



**Figure 4:** Climatic data of Enugu City

**Source:** NIMET year ended 2017.

The rainy and dry seasons, particularly with West Africa, are the only weather cycles in Enugu. The mean wind speed is 5.5 m/s between March and September with an average of 7.1 m/s in August. Typical wind path comes relatively from the west for an average of 10 months (termed the monsoon season), ranging from January to November, with peak percentage of about 75% occurring in July [11]. Also, in the harmattan season, the wind now changes direction to the north from November to January, with 41% occurring in the peak month of January [11].

### Methodology

The methodology of this study is a review of various literatures on bioclimatic strategy in warm humid climate and relating it to the climate of Enugu. The Psychrometric chart, which was adopted from [12], was used to analyze the climatic condition of the study area. The bioclimatic design strategy that will aid thermal comfort and improve energy efficiency will also be identified.

The Givoni chart shown in figure 5 is a bioclimatic diagram that has been divided into different zones for which it is necessary to use strategies to achieve human comfort within a building. The x-axis represents the dry bulb temperature and the y-axis shows the fresh air humidity; psychrometric curves in the graph represent the relative humidity. Here, 14 zones are defined based on definitions of bulb temperature and fresh air humidity.

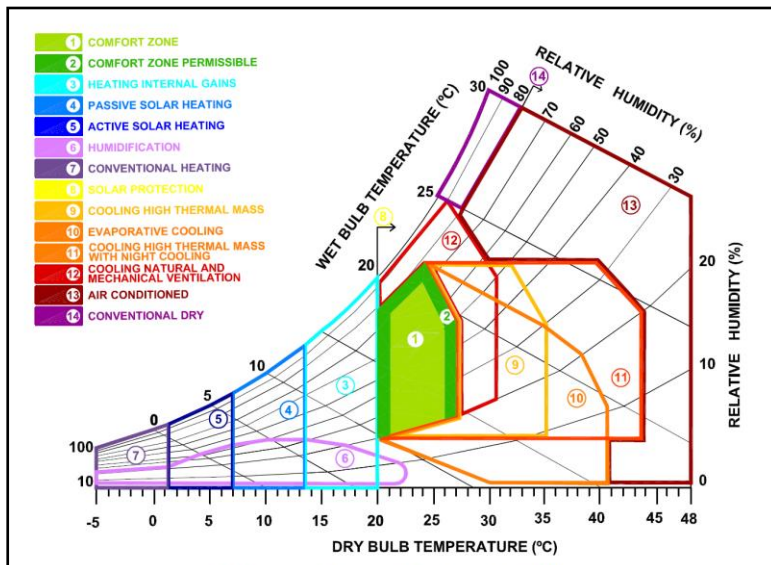


Figure 5: Psychrometric Chart

Source: Givoni (1992)

From these, zones 1 and 2 are the ideal comfort zones. Thus, we can define climatic conditions and the associated architectural strategies to shift the environmental conditions of the home into the comfort zone. Whenever possible, passive strategies will be proposed, as these consume zero energy. When this is not possible, these strategies will be applied to help reduce the use of energy consuming devices to the lowest possible levels. To study the possible bioclimatic architectural strategies, we must first evaluate the conditions in which the home is located. The environmental conditions will place us within a zone in the Givoni diagram. If we are in the comfort zone, architecture will not have to perform any thermal corrections but if we are outside of the comfort zone, architectural strategies can be implemented to reach the comfort zone.

### Findings

Through Wide Literature Review Appropriate Strategies evolved include. Using Giovanni's Concept, Enugu can be said to be in zone 8 where temperature values are from 20 or higher. In this case, bioclimatic architecture strategies attempt to avoid heat gains through solar radiation and avoid temperature increases to remain in the comfort zone. Protection is focused on all building openings but can also be generally applied to the building envelope. Solar protection can be implemented naturally such as the use of trees or through architectural elements such as pergolas with vegetation, porches, awnings, and blinds.

## **Discussion**

In hot and dry climate, compact buildings with small windows and a high thermal mass are preferred; in warm and humid climate, buildings with more openings and permeable are considered. The two main goals informing the design decision are:

- a) Minimizing heat gains in building
- b) Enhancing heat loss where possible

## **Bioclimatic Design Strategies in a Warm Humid Area**

Achieving thermal comfort in a warm humid area, heat absorption and heat storage are avoided, while the use of double skin structures, low thermal mass and high reflective outer surfaces is ideal. Indoor temperature is maintained by proper design for ventilation and utilization of air movement at increased velocity, which takes the advantage of reducing heat and the humidity level.

The bioclimatic approach tends to apply the passive design which saves energy using day lighting and wind passively, without conversion of solar and wind to electrical energy. The passive design in warm humid areas like Enugu find out ways to prevent building heating caused by solar radiation, without sacrificing the needs of natural lighting. Also, the use of wind as natural ventilation is also explored to obtain the optimal thermal comfort. This submission agrees with the findings of [13], who assert that passive system in bioclimatic design can be attained through the following basic strategies:

1. Understanding of climate and climate zones
2. Identification of the comfort zone
3. Identify the sources of heat
4. Optimization of micro-climatic conditions
5. Defining the characteristics required for the configuration of building and the building envelope

Furthermore, [14] mentioned that an important component in bioclimatic design is passive cooling for indoor air condition. This technique provides cooling by using air to carry heat out of the building by convection cooling and, from the human body by physiological cooling. The effectiveness is determined by outdoor conditions, microclimate and characteristics of the building i.e. building orientation, number and sizes of openings. To achieve thermal comfort through natural ventilation, windows will be openable and will be placed adjacent or opposite each for cross ventilation. Landscape elements like trees can be used to direct the wind. In the case where natural cross ventilation is not possible to achieved, stack effect can be used to get a chimney effect. The framework for bioclimatic design strategies to achieve the optimal thermal comfort in warm humid environment is summarized as follows:

## **Building Design**

### **Orientation:**

- Correct building placement and orientation
- Provide overhangs or outward shading for north and south facing windows
- Good landscape planning
- Windows should open towards prevailing wind

### **Building form:**

- Use for that provide Buffer zones and thermal zoning
- Use open and permeable geometry allowing air flow
- Daylighting zones
- Design with Courtyards

### **Materials:**

- Use roofs with High Solar Reflective Index
- Material with Low thermal mass
- Windows with Visible Light Transmittance > 60% for good daylighting

## **Conclusion and Recommendation**

Bioclimatic design by extension is a Green design building approach. There is no better time other than now for Nigeria to pursue green designs and technologies to combat present and future challenges [15]. The premise of the bioclimatic design strategy is that buildings utilize natural heating, cooling, and daylighting in accordance to local climatic conditions. Therefore, we can derive the appropriate bioclimatic design strategies that will be suitable for a warm humid climate by analyzing the design with regards to natural ventilation, daylighting, and passive heating and cooling. By adopting these strategies of bioclimatic building designs, the energy required for cooling and lighting a building will be reduced especially in the residential building type where people spend most of their time. Residential buildings also will not only benefit from reduced energy usage as a result of these bioclimatic measures, but will provide a more comfortable indoor climate for occupants, reduce the negative environmental impact, and be more economically sustainable.

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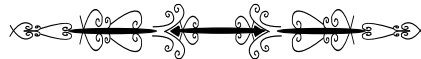
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## PUBLIC ADMINISTRATION AND NATION BUILDING IN NIGERIA, CREATING CONNECTIONS AND DEVELOPING POSSIBILITIES

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### Abstract

*Nigeria as a nation is in dire need of using Public Administration as an instrument of Nation Building, which involves establishing institutions with adequate utilization of highly connected and developed human capital or people with the strong cerebral capacity and intellectual sagacity that can project our bureaucracy on the pedestal of unhindered opportunities and prospects. Politics focuses on the determination of the will of a state while public bureaucracy is responsible for actualizing the will of a state. Traditionally, public bureaucracy performs three functions: supporting the policy-making function of government; facilitating or regulating the private sector and providing managerial leadership for operating public sector enterprises. The capacity of public bureaucracy to perform its statutory functions is critically dependent on its ability to attract and retain competent and highly skilled personnel in the professional category; the willingness to offer attractive pay and benefits package; and the modernization of the office infrastructure. The paper made use of secondary source or method of data collection and exploratory approach with public choice theory as a theoretical framework. The paper concluded that the practice of public administration in Nigeria is still characterized with lethargic and slowness in official decision and action, insensitiveness to the value of time, irregularity in the attendance at work, nepotism, wastefulness of government resources, high corruption scales, slowness to change, unresponsive and discourteous attitude to the public among several others. The paper recommended that there is need to create a public bureaucracy that is staffed with competent men and women who are committed to efficient service delivery.*

**Keyword:** *Public Administration, New Public Management, Bureaucracy, Civil Service, Public Service, Nation Building, Developing Possibilities*

### Introduction

The attempts to improve the capability of the public bureaucracy in the enhancement of effective service delivery led to a shift from traditional public administration to new public

management as a result of political development. This has made public administration to embrace; creativity, innovation, accountability, transparency, efficiency, improved productivity and digitalization in place of; red-tapism, lack of initiative, traditionalism, analogue and moribund secretariat administration. A shift from traditionalism to modernism has offered several opportunities to public sector administration. The emergence of New Public Management and effective administration has resulted in the need for new skills, attitudes and behaviours among public officials at all levels. However, any time a new method is introduced; those who are used to the old system tend to resist the forces of change. In light of this, there is a need to create a new environment, make the right connection, build the capacity of leaders, create new opportunities and develop new prospects. The paper seeks to address the aforementioned issues.

### **Objectives of the Study**

The main objective of this study is to explore Public Administration as an instrument of Nation Building. It also centres on creating connections and building those who build the Nation with developing possibilities to take Public Administration to the next level. The specific objectives are to;

1. Assess the inherent benefits and contradictions in transiting from traditional public administration to new public management.
2. Ascertain the extent to which a paradigm shifts old public administration to new public management has the tendency of enhancing the building and sustained of strong institutions in order to guarantee transparency and accountability.

### **Methodology**

The paper made use of secondary source or method of data collection and exploratory approach. This will enable the researchers to explore the instrumentality of Public Administration in Nation Building dwelling extensively on the opinions of Scholars in the area of study

### **Theoretical Framework**

**Public choice theory** The approach to public administration came into existence in the 1960s, almost coinciding with the new public administration. Vincent Ostrom and Gordon Gunlock are the chief proponents of this approach. It was advocated for the replacement of the traditional doctrine of 'bureaucratic administration' by the concept of 'democratic administration'. In his book "The Intellectual Crisis in American Public Administration", Ostrom writes: "bureaucratic structures are necessary, but not sufficient structures for a productive and responsive public service economy". He further says "perfection in the hierarchical ordering of a professionally trained public service, accountable to a single centre of power will reduce the capability of a larger administrative system to respond to diverse

preferences among citizens for many different public goods and services and cope with diverse environmental conditions (Hendrie and Porter, 1987).

Public Choice analysis has roots in the positive analysis ("what is") but is often used for normative purposes ("what ought to be") to identify a problem or to suggest improvements.

Public choice theory modelled government as made up of officials who, besides pursuing the public interest, might act to benefit themselves, for example in the budget-maximizing model of bureaucracy, possibly at the cost of efficiency.

Relating the theory with the study on Public Administration and Nation Building, the usual model depicts the top bureaucrats as being chosen by the chief executive and legislature, depending on whether the democratic system is presidential or parliamentary. The typical image of a bureau chief is a person on a fixed salary who is concerned with pleasing those who appointed him or her. The latter has the power to hire and fire him or her more or less at will. The bulk of the bureaucrats, however, are civil servants whose jobs and pay are protected by a civil service system against major changes by their appointed bureau chiefs. This image is often compared with that of a business owner whose profit varies with the success of production and sales, who aims to maximize profit, and who can in an ideal system hire and fire employees at will. William Niskanen is generally considered the founder of public choice literature on the bureaucracy.

### **Conceptual Clarifications**

#### **Nation Building**

Nation-building has many important aspects. Firstly, it is about building a political entity which corresponds to a given territory, based on some generally accepted rules, norms, and principles, and common citizenship. Secondly, it is also about building institutions which symbolize the political entity – institutions such as a bureaucracy, an economy, the judiciary, universities, a civil service, and civil society organizations. Above all, however, nation-building is about building a common sense of purpose, a sense of shared destiny, a collective imagination of belonging. Nation-building is therefore about building the tangible and intangible threads that hold a political entity together and gives it a sense of purpose. Even in these days of globalization and rapid international flows of people and ideas, having a viable nation remains synonymous with achieving modernity. It is about building the institutions and values which sustain the collective community in these modern times (Olalekan, 2015)

Prof. Gambari once observed that in Nigeria, however, some people represent our national importance by calling us the 'Giant of Africa'. This is a mere ascription. We are seen as giants not necessarily because of the quality of our national institutions and values, but simply by our large population and oil wealth. But in reality, the greatness of a nation has to

be earned and is not determined just by the size of its population or the abundance of its natural resources. China and India have the largest populations in the world, but they are only now rising as important global players. On the other hand, Japan has few natural resources but has long managed to turn itself into a global economic powerhouse (Gambari, 2008).

In today's world, skills, industriousness, productivity, and competitiveness are the determinant factors of national greatness. Not even the possession of the nuclear bomb is enough to make a nation great without reference to the industriousness and creativity of its citizens. Since the time of Adam Smith, every serious nationalist and politician has come to know that the wealth of a nation is not based on the wealth and opulence of its rulers, but the productivity and industriousness of its citizenry.

The real question is why has the task of nation-building been so difficult in Nigeria, and the fruits so patchy, despite our enormous human and natural resources? There is need to look for the answer in three critical areas: (1) threats and challenges posed by the environment for nation-building; (2) the quality of leadership that has confronted these challenges; and (3) the fragility of political and development institutions. It necessary to understand the environment for nation-building in Nigeria, so we can identify our strengths, weaknesses, and core challenges. There is also need to evolve a system of leadership selection and accountability which produces the sort of leaders that will confront the challenges of the environment in a way that is beneficial for nation-building. As the study has reiterated at the beginning, nations are a product of the human will and imagination and the institutions that sustain their collective efforts.

Leadership as a human capital tenet of our bureaucracy is a critical factor in nation-building and it should be understood in two important but related ways. First, there are the *personal* qualities of integrity, honesty, commitment, and competence of *individual* leaders at the top. Secondly, there are the *collective* qualities of common vision, focus, and desire for the development of the elites as a whole. The standards for recruitment and the performance of leaders over the years have left much to be desired. To succeed in nation-building, there is the need for a leadership that is committed to the rule of law and has a demonstrable sense of fair play and democratic tolerance; a leadership with ability and integrity; above all. We must have leaders who have a vision for a Nigeria better than the one they inherited; leaders who will lead by deeds and not by words; achievers, not deceivers. There is urgent need a leadership that will not only leave its footprints on the sands of time but one, which by dint of hard work, fair play, dedication and commitment, will live forever in the hearts of Nigerians.

Leadership is not everything, but it is an extremely important factor. Unless we have leaders with ability, integrity, commitment, and vision, we cannot succeed at nation-building. It is gratifying to note that within the judiciary, the National Assembly, and within the Executive, the issue of the quality of leadership is currently receiving attention. We must not relent in this struggle for quality leadership as it is the key to building our nation. Beyond the qualities of individual leaders, however, there is the equally important question of the quality of the collective leadership offered by the Nigerian elite class as a whole. After all, a tree cannot make a forest, and an individual leader cannot do everything alone.

### **Creating Connections, Building institutions and People Responsible for Nation Building**

There are three important components of nation-building: setting the rules; hiring persons with the technical expertise and moral competence to interpret the rules or implement the goals of the organizations; and ensuring that the institutions inspire public confidence by being transparent, fair and consistent. These are also the standards by which the performance of any organization, in particular, public sector organizations should be measured. This shows that the act of creating the organization itself is not as important as its proper functioning and overall effectiveness. In this regard, Nigeria needs to create, connect, build or strengthen institutions and people that would help achieve the national goals of democratic governance and sustainable development. These include:

#### **(a) Institutions and human capital for fostering public integrity**

When referring to the courts or the ICPC or Economic and Financial Crime Commission (EFCC) as institutions that fight corruption; it implies that these organizations not only operate and apply or enforce a set of rules but also aim to create a system of values that rejects the abusive of public position for private gain.

Today, there are three institutions equipped with experts that are dedicated to fostering integrity in the public sector: the Code of Conduct Bureau [CCB], the ICPC and EFCC. Together the ICPC's mandate includes reviewing public sector systems and procedures with to eliminating pitfalls for corruption, public enlightenment and mobilization against corruption and enforces the law in these areas. By contrast, EFCC has the mandate to combat 419 crimes, money laundering, and terrorist financing and fraud in the financial sector.

Yet, there is also growing sense among the public that there is an overlap in functions between the ICPC and EFCC. However, those knowledgeable with the statues creating the ICPC and EFCC argue that the main area of overlap is in the definition of economic crime as including corruption. The anti-corruption bodies have met the criteria of inspiring public confidence in their work. That public confidence will be raised much higher if the functions are delineated in a way that can easily be grasped by the public.

**(b) Institutions and human capital for public service delivery**

The civil service is the main instrument and institution of public service delivery. Traditionally, the civil service performs three functions: supporting the policy-making function of government at the federal, state and local government; facilitating or regulating the private sector; and providing managerial leadership for operating public sector enterprises. The capacity of the Nigerian civil service to perform its statutory functions is critically dependent on its ability to attract and retain competent and highly skilled persons in the professional category; the willing to offer attractive pay and benefits package of the public servants; and the modernization of the office infrastructure.

The reforms of the federal civil service have rightly focused on improving the pay package, increasing the number of staff in the professional category and improving service to the public through the Service Compact with Nigerians (SERVICOM).

Nonetheless, much remains to be done both in improving the office infrastructure in the civil service and in bringing public servants attitude to the standards of many emerging economies. Moreover, it is doubtful whether the new pay scale has done much to improve the overall conditions of the civil servants. While high pay may not offer a guarantee against fraud and corruption, it is a major incentive to work harder and show commitment to public service.

**(c) The human capital and Judicial Institutions**

The Judiciary is an important institution in any democracy but they are essential to the functioning of a market economy. The judiciary not only arbitrates disputes between the various levels of government, between government and citizens, and among citizens but also among private sector agents. Given its pivotal role in national stability and economic prosperity, some of the major features of good institutions noted earlier are quite relevant. These institutions should have persons with the technical expertise and moral competence to interpret the rules or implement the goals of the organizations and ensure that the institutions inspire public confidence.

In recent times, the Supreme Court, the apex court in the country, has inspired much public confidence and respect because of the quality of its judgment, especially in some politically sensitive cases. In some ways, the gradual maturity of the democratic process in Nigeria, where politicians now prefer legal recourse rather to local rampage with their supporters and loyalists, is directly linked to the growing public confidence in the courts. Election-related disputes should be addressed in the courts –be they electoral courts or ultimately in judicial courts –and not through violence.

There are multiplying instances of election-related violence tearing apart the social fabric in several African countries. Nigerians have also needlessly shed much blood in the past. If Nigerians are beginning to realize the futility of shedding blood in elections disputes, this owes much to our judiciary, which has provided reasoned judgment on several cases. Nonetheless, the responsibility for conducting free and fair elections and accepting results should not be left to the judiciary alone. Democracy cannot be built solely on court orders or judgment of electoral tribunals.

**(d) Institutions and human capital for Economic Governance**

The functioning and effectiveness of a market-based economy such as Nigeria rely on several institutions. It requires an institution to regulate the supply and flow of money and the financial system (Central Bank); to allocate capital to firms and individuals (Banks and Stock Exchange); to ensure against commercial risks (insurance firms); to ensure individual bank depositors against loss of up to certain amount (deposit insurance); to enforce contractual obligations (courts); and to collect revenue for the government (fiscal authorities). The performance of our national institutions of economic governance is a mixed one. However, the reform of the financial sector has strengthened public confidence in the banks especially and opened opportunities for our banks to extend their reach to other parts of the region (Van-Den-Berg, 2001).

How to spread the benefits of growth and development to all, in other words, how to achieve equitable growth, is a major public policy challenge. In Nigeria, little effort has been made in that direction. The key instruments for sharing include unemployment insurance, access to affordable housing, and access to health.

**Developing Possibilities and Prospects**

Public bureaucracy in Nigeria had in the time past undergone various reform processes to reposition the public service for efficiency and capacity development of civil servants in the country towards growth-driven economy. However, past reforms were faced with structural divisions and defects that hardly allowed the different attempts to change the way of doing things and build needed capacity to create efficient public service to attract Direct Foreign Investment DFI. The following are the processes of creating, connecting and building future leaders who are capable of taking the Nigerian public service to the next level:

**(a) Quality Education**

Quality education has become food for thought for all well-meaning individuals. Education is of great importance to every nation as it is quite obvious that the functionality of an individual in any nation is largely dependent on the quality of education that is imparted on that individual. There is a consensus among scholars that education is the most potent instrument for the overall development of any nation (Abolade, Ogbodo & Maduewesi, 2011).



There can be no productive human capital without a functional education, hence Van Den-Berg (2001) opined that countries that are at the forefront of technological advancement equally have the most educated population. This assumption is probably borne out of the view that the purpose of quality education is to create critical thinking that brings about the development of new technologies and new methods of production in line with the demand of the new dispensation. Educated people possess more skills and can perform their jobs effectively. They are also better suited to more complex jobs, which are often associated with high rates of pay and greater economic benefits

**(b) Provision of Legal Framework and Enforcement of Regulation of the Public Service**

The 1999 Constitution has not provided an adequate legal framework to regulate public service. The Public Service Rules no longer reflect the Constitution, and these gaps make them both ineffective in regulating the public service. This gap needs to be closed up by fast-tracking the enactment of the draft Public Service Bill. Once this is done, Public Service Rules need to be revised. It is necessary to carry out a regular review of Public Service Rules, and Financial Regulations every five years going forward. Public Service Rules and Regulations are weak and sometimes selectively enforced with different standards applied across the board. Effective enforcement of the revised Public Service Rules and Regulations will restore discipline in the civil service. It is therefore imperative that the Ethics and Compliance Division in the newly created Civil Service Transformation Department (Service Policies and Strategy Officer of the OHCSF) develops a framework to address the issue of uniform enforcement of Public Service Rules.

**(c) Merit-based appointment and promotion and the 'Federal Character' principle**

All civil service systems in both developed and developing countries seek to balance respect for the merit principle with attention to diversity. In broad terms, diversity in civil service human resource management involves assuring fair representation for ethnic or racial groups, geographical areas, women and persons with a physical disability. A good practice is to spell out clear guidelines (including percentage targets in some cases) on how to ensure fair representation within the civil service. But every well-performing civil service in the world relies on the merit principle as the primary criterion for appointments and promotions. The recruitment process in Nigeria is not transparent enough. Although promotion is largely merit-based, the existence of a patronage culture also reduces its transparency. There is a need for more transparency in the recruitment and promotion processes. This may require reviewing the functions of the commissioners in the recruitment and promotion processes in FCSC.

**(d) Professionalization within the civil service**

Under the 1988 Civil Service Reform, an attempt was made to extend professionalization within the civil service beyond the traditional groups of engineers, accountants, doctors and

lawyers etc. It was envisaged that the finance function would be entrusted to finance professionals while planning and research experts would lead newly created Planning, Research and Statistics Departments. This professionalization effort was not sustained, and only the traditional professional groups were recognized in the civil service that the military left behind in 1999. Evidence from well-performing civil services in developed and developing countries suggests that increased professionalization in civil service management is desirable. Some of the functions that have been professionalized elsewhere include those of policy analysts, economists, and human resource managers. In the Nigerian situation, broadening and sustaining professionalization will require the introduction of professional certification or its equivalent in the medium term. Professionalization will also improve the relationships between political office holders and civil services. There are concerns about the current practice of recruiting aides to political office holders from outside the civil service – politicians do not believe that civil servants have appropriate competences, but if civil servants are excluded from providing close support to political office holders, the public service can be politicized. Improving the skills of civil servants in policy analysis and development, research and evaluation and communications will assist in addressing this issue.

**(e) An Effective Performance Management System**

There have been past efforts at improving the performance management system of the Civil Service, including the Udoji Report of 1974 and the 1988 Civil Service Reforms. However, the developments now point to a serious need for comprehensive change. Among the consequences of this deficiency is the unsatisfactory level of institutional performance and service delivery. The development and institutionalization of an effective and credible performance management system are therefore considered imperative for the Civil Service going forward. Introduction of a new approach to performance management will align the work of civil servants with the Federal government's strategic vision and goals. It will show how their work fits in to, and how they contribute to the achievement of the FGN's vision and the objective of the MDA in which they work. The implementation of the revised performance management system will ensure there is a clear understanding of job expectations, regular feedback about performance, advice and steps for improving performance. Through this, it will increase engagement of civil servants and improve the delivery of services to the citizen.

**(f) Undertake a Comprehensive Job Evaluation in the Public Service**

A comprehensive job evaluation of the public service is long overdue. The previous one was carried out by the Udoji Commission in 1972-1974, some forty years ago. The existing job evaluation system is outdated, especially because of changes in jobs, economic developments, a technology that affect business processes, and in the job skills in the labour market. Job evaluation can be a very complex, expensive and time-consuming exercise, so time will be invested in its planning, as well as the development of the capacity of the National Salaries,

Incomes and Wages Commission (NSIWC) to manage the process. The current job evaluation scheme has become obsolete and is inadequate for the task. It needs to be redesigned.

**(g) Enhanced incentives for the civil servants**

Federal civil servants perceived that the incentive system has collapsed. The implementation of the monetization policy led to the loss of fringe benefits, which is seen to have reduced incentives and therefore caused low morale in the service. The monetization policy did not, for example, make sustainable provision for new entrants into the public service to acquire their own houses. Although the monetization policy may have taken care of this issue for existing workers, new employees who enter the service are faced with similar housing problems. The problem was compounded as many public servants who lost their official quarters were forced to find accommodation that was less convenient in location. There are reports that such workers get to the office late every day. The lack of an effective transport system makes matters worse for those who do not have personal means of transportation.

**(h) Improved Competence of Civil Servants**

Training and capacity building in the civil service was neglected for decades. This was identified as a major explanatory factor for its weakness in 1999. But as soon as a civilian administration assumed power in 1999, attention was paid to training and capacity building, which was accelerated during the 2004-2007 Public Service Reforms implementation period. However, the ongoing objective of improving the competence of civil servants means further efforts in training and capacity building. Training programmes have rarely been based on identified needs. More importantly, training has been used as an instrument of patronage and has served more as welfare than as a tool for building capacity for performance. This needs to be addressed. There is also a need to focus more sharply on leadership and management development and on increasing the effectiveness of public service learning centres. To ensure that the civil service has appropriately skilled and knowledgeable staff, it is essential that staff training is based on identified needs.

The identification of training needs through systematic training needs analysis must be the initial step in the development of training policy. There is an urgent need to develop a broad training policy for the entire civil service. This should be accompanied by a training budget. There should also be Ministry Department and Agencies-specific training policies and programmes, supported by allocated training budgets. The training policies, programmes and budgets will need to be reviewed periodically - at three- or five-year intervals. It is expected that these policies and programmes will cover the range of on the job training as well as formal training courses, given how central on the job training, responsibility for this lies at MDA level, and is in terms of capacity development. This systematic approach to training will ensure that civil servants attend training programmes that are relevant to the jobs they do. It will also help reduce the current ad hoc approaches to training where some staff have more

than one opportunity a year, while a large number spend four or five years without attending any training programme. The good practice model of preparing a training calendar and roster for all targeted staff in a year will be encouraged (Anthony, 1965). Expenditure on human capital development, in the recent past, has not closed the capacity gaps in the public service. In addition to the approaches above, there is a need to 'go back to basics' to ensure that public servants have the foundation to benefit from the more formal capacity development opportunities (Anthony, 1965).

**(i) More Effective Public Service Learning Centres**

The capability of public service training institutions has been neglected, in parallel with the decades of neglect of staff training and capacity building in the public service. The most glaring evidence of this was the decline of the Administrative College of Nigeria (ASCON) in Badagry, with deteriorating facilities and underutilized capacity. The establishment of Civil Service College (CSC) in Abuja - renamed Public Service Institute of Nigeria (PSIN) - is evidence of more recent commitment to quality public service learning institutions, as is the effort to re-position ASCON. However, there is a need for a legal framework and formal establishment by an Act of the National Assembly: delays in this have prevented full and effective functioning of training and staff development institutions.

**(j) Improved leadership and management development**

Managers need to manage, deliver on their objectives and key performance indicators and to help their staff build capability and improve their performance. Managers do not only have a role in monitoring achievement of service delivery standards but they are also involved in getting their part of the wider public service to achieve those standards. Leadership and management development is thus a key dimension to staff development in well-performing civil service systems. The initial effort made in 1999/2000 has not been sustained. Rolling two- or three-year programmes are needed to develop the competences of chief executives, permanent secretaries, and other senior civil service executives. This is critical, in particular given the high turn-over rate of permanent secretaries in the last few years. There is a need to conduct programme exclusively meant for civil service senior managers, others will involve participation by senior executives from the wider public service. It is possible that occasional leadership and management development programmes could also involve senior executives from the private and voluntary sectors.

**(k) Accountability, result-oriented and citizens-centred work culture**

The issue of accountability and results focus within the civil service are closely linked to the issues of anti-corruption and transparency. Success with anticorruption education with an emphasis on ethics and integrity will mean in time that officials recruited into the service will be Nigerian men and women who abhor corruption, are accountable and are committed to

high ethical standards. All this will result in a work culture that is oriented towards achieving high productivity and quality service delivery. However, to achieve this will take time.

### **Conclusion and Recommendations**

It is a common knowledge that there has been little or no departure from the old order despite the numerous public service reforms carried out by successive administrations in Nigeria since independence. As a matter of fact, the practice of public administration in Nigeria is still characterized with lethargic and slowness in official decision and action, insensitiveness to the value of time, irregularity in the attendance at work, nepotism, wastefulness of government resources, high corruption scales, slowness to change, unresponsive and discourteous attitude to the public among several others. Given because of the above, this paper has explored creating, connecting, building those who built the nations, developing opportunity and prospects. It was discovered that there is an urgent need to develop public bureaucracy that is willing to create a network of relationship with the general public to meet their yearnings and aspirations. It equally became clear that the time has come to be committed to the empowerment and capacity building of those who are entrusted with the responsibilities of building the nation. To realize the above expectations, there is a need for public enlightenment campaign and value re-orientation of public servants at all levels.

Nations are built by men and women who have the will and vision to accomplish greatness, not for themselves, their immediate families and friends, but for their country. I believe that if we can find the will to offer such leadership, and support it by strong and dependable political and economic institutions, we will find a way to our national greatness.

In Summary, the following measures are considered necessary in repositioning the practice of public administration in Nigeria towards the enhancement of effective service delivery:

1. There is a need to create a public bureaucracy that is staffed with competent men and women who are committed to efficient service delivery
2. It is necessary to develop a courteous, friendly, receptive and helpful relationship between public bureaucracy and the general public
3. There is a need to make public servant eager and pro-active to create a network of relationship with the general public to meet their yearnings and aspirations
4. The time has come for the nation to build a transparent, honest and corruption-free public bureaucracy in their official dealings with the general public
5. There is a need to build institutions and leaders with exemplary standards of efficiency in service delivery with minimal waste; punctuality and time consciousness in all official businesses
6. It is time to create a public bureaucracy that is eager to respond to the problems and complaints of the general public appropriately and promptly

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## Language Skills and Teaching of Grammar

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### **Abstract**

Teaching grammar has been regarded, as crucial to the ability to use language. This process involves activities, which bring together the four language skills listening, speaking, reading and writing. The language teacher's task is the presenting of these skills i.e. receptive and productive. This paper aims at discussing language skills and the teaching of grammar in second language. The inductive and deductive methods of teaching grammatical items are critically examined via their advantages and disadvantages in teaching grammar. The ideas of the two approaches are later linked with Krashen's theory of second language acquisition. The educational implications of the two methods are highlighted. Recommendations as well as conclusion are drawn.

**Keywords:** *Language Skills, Teaching, Grammar*

### **Background to the Study**

Different learning processes are responsible for different aspects of language. Indeed, given that language is as complicated as it is, one would not expect the learning process to be any simpler. It is clearly an oversimplification to treat all grammar learning as resulting from habit formation or from rule formation. Being aware that different learning processes contribute to Second Language Acquisition SL Asuggests a need for the teaching process to respect the differences. How the nature of the language challenge and the learning process affect teaching of grammar? In this paper, the deductive and inductive method will be discussed. Similarly, the motive behind these approaches will be linked with Krashen's Theory of language acquisition and look at their practical similarities, all with view to providing simple ways of teaching grammar

### **Language Skills**

The ability to use a language in a communicative way, however, is not just a single unified skill. Most recent thinking has divided language ability into four separate skill areas; *listening, reading, speaking, and writing*. Listening and reading are known as the *receptive skills*; while

speaking and writing are known as the *productive skills*. According to Summer Institute of Linguistics, International (1999). The four basic skills are related to each other by two parameters: the mode of communication: oral or written the direction of communication: receiving or producing the message.

Most teachers try to incorporate all four skills areas into their planning, though some classes may focus more on one set of skills or the other, due to the course and learner objectives (Oxford, 2001). When learning new language material, the order of acquisition is generally this, for both second language learners and children learning their first language: Listening: The learner hears a new item (sound, word, grammar feature, etc.) Speaking: The learner tries to repeat the new item. Reading: The learner sees the new item in written form. Writing: The learner reproduces the written form of the item.

When one is planning to present a new teaching item (sound, grammar point, vocabulary word, etc.) keep the order of acquisition in mind. It is best to expose the learners to the item in that same order, so that they are exposed to it as a listener before they are called on to use it as a speaker, and that they hear it before they see it in text. In this way, the order of learning a second language is similar to the way a child learns his or her first language. He/she will be able to understand the new item for quite a while before he/she is able to produce it and use it in communication (Laubach Literacy Action, 1996).

### **Teaching of Grammar**

Grammar gains its prominence in language teaching, particularly in English as a foreign language (EFL) and English as a second language (ESL), inasmuch as without a good knowledge of grammar, learners' language development will be severely constrained. Practically, in the teaching of grammar, learners are taught rules of language commonly known as sentence patterns. According to Ur (1999), in the case of the learners, grammatical rules enable them to know and apply how such sentence patterns should be put together. The teaching of grammar should also ultimately centre attention on the way grammatical items or sentence patterns are correctly used. In other words, teaching grammar should encompass language structure or sentence patterns, meaning and use.

Further, grammar is thought to furnish the basis for a set of language skills: listening, speaking, reading and writing. In listening and speaking, grammar plays a crucial part in grasping and expressing spoken language (e.g. expressions) since learning the grammar of a language is considered necessary to acquire the capability of producing grammatically acceptable utterances in the language (Corder, 1988; Widodo, 2004). In reading, grammar enables learners to comprehend sentence interrelationship in a paragraph, a passage and a text. In the context of writing, grammar allows the learners to put their ideas into intelligible sentences so that they can successfully communicate in a written form. Lastly, in the case of



vocabulary, grammar provides a pathway to learners how some lexical items should be combined into a good sentence so that meaningful and communicative statements or expressions can be formed. In other words, Doff (2000) says that by learning grammar students can express meanings in the form of phrases, clauses and sentences. Long and Richards (1987) add that it cannot be ignored that grammar plays a central role in the four language skills and vocabulary to establish communicative tasks.

### **The Philosophers' views on Deductive and Inductive Reasoning**

#### **Deductive Reasoning**

Aristotle, a Greek philosopher, started documenting deductive reasoning in the 4<sup>th</sup> century BC. Rene Descartes, in his book *Discourse on Method*, refined the idea for Scientific Revolution. Developing four rules to follow for proving an idea of deductively, Descartes lay the foundation for the deductive portion of the scientific method. Descartes' background on geometry and mathematics influenced his ideas on the truth and reasoning alone must prove that observations are reliable. These ideas lay the foundation for the idea of rationalism. Deductive reasoning also deductive logic is the process of reasoning one or more statements (premises) to reach a logically certain conclusion

#### **Inductive Reasoning**

Sir Francis Bacon was credited with introducing inductive reasoning into scientific inquiry in the 17<sup>th</sup> century. Bacon was a philosopher, and he sought to resolve the problems that Aristotle's deductive approach to creation presented, such as the fact that Aristotle decreed that the world conformed to his construction of it, rather than vice versa.

Not only that, but also most medieval thinkers had swallowed Aristotle whole, and regurgitated his ideas, which were often not even close to being correct. Bacon was frustrated by the obsolete and often clearly erroneous view of the world most of his contemporaries held. He sought to bring a whole new approach to philosophy and science. And so he did. While many others built on his ideas, Bacon accomplished something truly revolutionary.

Inductive reasoning begins with specific details and observation of natural occurrences or behavior, say - and use them to arrive at a principle to explain them. Deductive reasoning moves from the general to specific. It uses logic to confirm something we already to be true.

### **Two Core Approaches in Grammar**

Broadly speaking, in teaching grammar, there are two approaches that can be applied: deductive and inductive. In this section, the two approaches would be briefly highlighted, and then link them to the theory of second language acquisition (SLA).

#### **Deductive Approach**

A deductive approach was derived from the notion that deductive reasoning works from the general to the specific. In this case, rules, principles, concepts, or theories are presented first, and then their applications are treated. In conclusion, when we use deduction, we reason from general to specific principles.

Dealing with the teaching of grammar, the deductive approach can also be called rule-driven learning. In such an approach, a grammar rule is explicitly presented to students and followed by practice applying the rule. This approach has been the bread and butter of language teaching around the world and still enjoys a monopoly in many course books and self-study grammar books (Fortune, 1992). The deductive approach maintains that a teacher teaches grammar by presenting grammatical rules, and then examples of sentences are presented. Once learners understand rules, they are told to apply the rules given to various examples of sentences. Giving the grammatical rules means no more than directing learners' attention to the problem discussed. Eisenstein (1987) suggests that with the deductive approach, learners be in control during practice and have less fear of drawing an incorrect conclusion related to how the target language is functioning. To sum up, the deductive approach commences with the presentation of a rule taught and then is followed by examples in which the rule is applied. In this regard, learners are expected to engage with it through the study and manipulation of examples.

In the case of the application of the deductive approach, therefore, Michael Swan (cited in Thornbury, 1999, p. 32) outlines some guidelines for when the rule is presented. Among them are:

1. The rules should be true;
2. The rules should show clearly what limits are on the use of a given form ;
3. The rules need to be clear;
4. The rules ought to be simple;
5. The rules need to make use of concepts already familiar to the learners; and
6. The rules ought to be relevant.

Most importantly, when the rules are presented in the deductive approach, the presentation should be illustrated with examples, be short, involve students' comprehension and allow learners to have a chance to personalize the rule.

Nonetheless, the deductive approach has its own advantages and disadvantages as shown in Table 1 below.

**Table 1:** Advantages and disadvantages of the deductive approach to teaching grammar

Advantages	1. The deductive approach goes straightforwardly to the point and can, therefore, be time-saving.
	2. A number of rule aspects (for example, form) can be more simply and clearly explained than elicited from examples
	3. A number of direct practice/application examples are immediately given.
	4. The deductive approach respects the intelligence and maturity of many adult learners in particular and acknowledges the role of cognitive processes in language acquisition.
	5. It confirms many learners' expectations about classroom learning particularly for those who have an analytical style.
Disadvantages	1. Beginning the lesson with a grammar presentation may be off-putting for some learners, especially younger ones.
	2. Younger learners may not be able to understand the concepts or encounter grammar terminology given.
	3. Grammar explanation encourages a teacher-fronted, transmission-style classroom, so it will hinder learner's involvement and interaction immediately.
	4. The explanation is seldom as memorable as other forms of presentation (for example, demonstration).
	5. The deductive approach encourages the belief that learning a language is simply a case of knowing the rule.

### Inductive Approach

An inductive approach comes from inductive reasoning stating that a reasoning progression proceeds from particulars (that is, observations, measurements, or data) to generalities (for example, rules, laws, concepts or theories) (Felder & Henriques, 1995). In short, when we use induction, we observe a number of specific instances and from them infer a general principle or concept.

In the case of pedagogical grammar, most experts argue that the inductive approach can also be called rule-discovery learning. It suggests that a teacher teach grammar starting with presenting some examples of sentences. In this sense, learners understand grammatical rules from the examples. The presentation of grammatical rules can be spoken or written. Eisenstein (cited in Long & Richards, 1987) maintains that the inductive approach tries to utilize the very strong reward value of bringing order, clarity and meaning to experiences. This approach involves learners' participating actively in their own instruction. In addition, the approach encourages a learner to develop her/his own mental set of strategies for dealing with tasks.

In other words, this approach attempts to highlight grammatical rules implicitly in which the learners are encouraged to conclude the rules given by the teacher.

Similar to the deductive approach, the inductive approach offers advantages and disadvantages as seen in the Table 2 below.

**Table 2:** Advantages and disadvantages of the inductive approach to teaching grammar

Advantages	1. Learners are trained to be familiar with the rule discovery; this could enhance learning autonomy and self-reliance.
	2. Learners' greater degree of cognitive depth is "exploited".
	3. The learners are more active in the learning process, rather than being simply passive recipients. In this activity, they will be motivated
	4. The approach involves learners' pattern-recognition and problem- solving abilities in which particular learners are interested in this challenge.
	5. If the problem-solving activity is done collaboratively, learners get an opportunity for extra language practice.
Disadvantages	1. The approach is time and energy-consuming as it leads learners to have the appropriate concept of the rule.
	2. The concepts given implicitly may lead the learners to have the wrong concepts of the rule taught.
	3. The approach can place emphasis on teachers in planning a lesson.
	4. It encourages the teacher to design data or materials taught carefully and systematically.
	5. The approach may frustrate the learners with their personal learning style, or their past learning experience (or both) would prefer simply to be told the rule.

### **Relating Deductive and Inductive Approaches to Krashen's Second Language Acquisition Theory**

The Krashen's theory of second language acquisition consists of five hypotheses:

1. The acquisition- learning hypothesis
2. The monitor hypothesis
3. The natural order hypothesis
4. The input hypothesis
5. And the affective filter hypothesis

The Acquisition-Learning distinction is the most fundamental of all the hypotheses in Krashen's theory and the most widely known among linguists and language practitioners.

According to Krashen there are two independent systems of second language performance: the 'acquired system', and 'the learned system'. The acquired system or acquisition is the product of a subconscious process very similar to the process children undergo when they acquire their first language. It requires meaningful interaction in the target language – natural communication- in which the speakers are concentrated not in the form of their utterances, but in the communicative act.

The 'learned system' or 'learning' is the product of formal instruction and it comprises a conscious process which results in knowledge 'about' the language, for example knowledge of grammar rules. According to Krashen 'learning' is less important than 'acquisition'.

Deductive and inductive approaches relate to learning and acquisition in Krashen's SLA theory. Firstly, the deductive approach is related to the conscious learning process in which this approach tries to place a great emphasis on error correction and the presentation of explicit rules (Krashen, 2002). Such an approach is applied for the reason that it is an efficient and elegant way to organize and present the rule that is already understood. The deductive approach is often used with adult learners. Through the deductive approach, a teacher tries to teach the rule explicitly to the learners so that they are ready to cope with exercises given. The explicit rule presentation can enhance the learners' confidence in doing certain tasks. To be successful in applying the approach, the teacher needs to provide numerous exercises.

Secondly, the inductive approach relates to subconscious learning processes similar to the concept of language acquisition. According to this approach, learners learn the system of language (for example, grammar or sentence rules) in the same way as children acquire their first or second language. In this regard, meaningful interaction in the target language (that is, natural communication) is more important than the form of the language. For this reason, error correction and explicit teaching of the rule are de-emphasized. Most importantly, utterances are easily understood. In other words, when the inductive approach is applied, the learners learn the rule unconsciously.

Adapted from Krashen's acquisition/learning hypothesis (1987, 2002), I draw some conclusions in respect of the two approaches – deductive and inductive as listed in Table 3.

**Table 3:** Relationship of deductive and inductive approaches to Krashen's (1987, 2002) theory

Deductive	Inductive
Learn the rule in the context of formal instruction	Learn the rule as a child acquires her/his first or second language

Know about the rule	“Pick up” the rule
Learn the rule consciously	Learn the rule subconsciously
Learn the rule explicitly	Learn the rule implicitly

Of the two approaches above, which is best? This question relates to a long-standing debate among language teachers in the context of EFL/ESL, since the two have their own significances for particular learner progress. For example, a study of various language learners shows that some learners achieve better in deductive language classes; on the other hand, others perform better in more inductive classes. This difference in cognitive styles may be associated with different neurological mechanisms in learners (Eisenstein, 1987).

Whether grammatical rules are taught inductively or deductively rely upon certain structures, since some are more amenable to a deductive approach, while others can be learned very well by an inductive approach. To sum up, both deductive and inductive presentations can successfully be applied depending on the cognitive style of the learner and the language structure presented (Eisenstein, 1987; Brown, 2000). Nevertheless, whether a teacher employs a deductive or inductive approach, s/he should consider the notion that language learning, particularly in the context of EFL (for example, grammar) is a largely conscious process that involves formal exposure to rules of syntax and semantics followed by specific applications of the rule, with corrective and encouraging feedback reinforcing correct usage and discouraging incorrect usage.

### **Educational Implications**

The above-discussed approaches of teaching grammar have instructional implications as follows:

1. The deductive approach confirms many learners’ expectations about classroom learning.
2. The inductive approach involves learners’ pattern-recognition and problem solving ability.
3. Also, the approach enhanced motivation of students because learners are actively involved.
4. Inductive approach allows learners to be familiar with the rule discovery, and this could enhance learning autonomy and self-reliance.

### **Applicability of deductive and inductive approaches**

The deductive and inductive approaches of teaching grammar can be examined to ascertain their practability or otherwise on our day-to-day English language teaching.

First, it is obvious that most of English language teachers in Nigeria adapted deductive approach in the teaching and learning of English. Here, we have seen that rules of grammar are usually presented to the students and later exercises were administered. This type of approach has been reflected in most of the English Language textbooks common found in our schools. There are various topics such as Clauses, Phrases, Sentences, Concord, to mention but few which are common found in all English textbooks and are taught in our schools. Also, deductive approach has been for long in use in our schools. Some of Second language theories that supported deductive approach include Grammar Translation, cognitive theory and so on.

The inductive approach which advocates unconscious learning through practicing language as it is can only be applicable to young learners who learn through imitation. This approach seems to be difficult to adult learners like students of secondary schools and tertiary institution. The learners of level may prefer knowing the rules of grammar then later apply it in their communication to avoid errors.

### **Suggestions**

The study takes a position on the use of either deductive or inductive approach to English language; it is rather difficult if not impossible for an adult person to learn second language in such a way that a child acquires first language. However, it is agreed generally that deductive approach has been in existence yet it has not makes strong impact on English language teaching and learning. Due to these two divergent issues, the study believed that both the methods can be applied where the need arises. That is, the language teachers may use both the approaches to meet the demand of their learners in promoting their language proficiency and performances.

### **Conclusion**

The ultimate goal of teaching grammar is to provide the students with knowledge of the way language is constructed so that when they listen, speak, read and write, they have no trouble applying the language that they are learning. Language teachers are, therefore, challenged to use creative and innovative attempts to teach grammar so that such a goal can successfully be achieved. In other words, whatever exercises are given, the most crucial thing is that the teachers provide the students with an opportunity to be able to produce the grammatical item making use of syntactically and semantically correct examples of sentences comprised of appropriate and relevant vocabulary.

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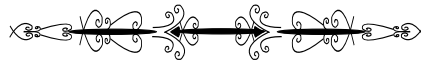
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## EDUCATIONAL NEEDS OF MARRIED WOMEN FOR SUSTAINABLE DEVELOPMENT IN SOKOTO STATE

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### Abstracts

*This paper analyses empirically the educational needs of married women for sustainable development in Sokoto state of Nigeria. A case study of Sokoto state women centre for continuing education. The objectives of the study were to identify the major educational needs of married women in Sokoto state and the difference between married and unmarried women. To achieve this, the research uses primary data collected from 100 out of the 340 married women students of Sokoto state women centre for continuing education using stratified sampling technique. Questionnaires were administered to the respondents and data collected was analyzed using t-test statistical tool. The result shows that women can contribute immensely to the sustainable development of their family and society economically, socially and morally. The research recommends that, the society should encourage the education of women, since they are partners in progress to men and should be given favorable chance to compete with them by using their talent in the economic development of the society.*

**Keywords:** Educational, Needs, Married women, Sustainable Development

### Introduction

Marriage is one of the social institutions and it is as old as the history of mankind. It is a universal institution that all societies recognize traditionally in some forms. Marriage can traditionally be described as the legal, voluntary union of a man and a woman. This Union is usually performed under a public ritual so as to have social recognition. Marriage may be contracted in civil form or according to religious ritual. Marriage as a social institution serves a number of social functions. First it serves as a basis for family formation, as basis for human procreation and child socialization. It is a unit of economic cooperation as well as sources of intimate relationship which assign status and social roles to individuals. It is however, pertinent to note that marriage in Nigeria is often associated with some social problems such as denial to the fundamental needs and right to education for the girl child. It is also associated with series of responsibilities for a wife in the home, which include child bearing and rearing as well as the general home maintenance and up keep. Thus a married woman wanting to

undergo a course of study may often have to combine these marital obligations with her study which may consequently have some devastating effects on her study. This is so because such a woman may have to use part of time she will otherwise devote to her study to carry out such obligations.

It is however worth nothing that marriage gives woman a social autonomy to act independent at the direct traditional control of the parent, elder, brothers, sisters and other elder relations. It serves as a means of grooming a woman for social life and maturity. It may positively influence a woman social behaviour towards a study. Husbands often see their wives as permanent partners in progress and therefore they will offer necessary support to their educational pursuit. Education is not only limited to the art of reading and write but it is a useful change in behaviour which distinguish one from the other. It is also a very strong instrument used in the overall development of societies the world over.

Education can be thought of as the transmission of the values and accumulated knowledge of a society. In this sense, it is equivalent to what social scientists term socialization or enculturation. Education is only one thing that can remove corruption, unemployment, and environmental problems. Education helps to become good students, parents, entrepreneurs, doctors, siblings and honest citizens. Being in contact with an educated person and having an intelligent conversation with him expands knowledge and introduces a certain creativity and joy in the mind. Education makes the national development process fast. Education develops good political ideology. The standard of living of its citizens is largely dependent on the level of education the citizens are able to acquire. Everyone deserves to be educated. Education is the first early investment for child development. Similar, for governments and nations, to make their country developed, their first budget allocation has to be on the education infrastructure in schools and colleges. Education is not limited to academics and schooling. It's more than an expansion. For example, in any nation people need education (common sense) on various things:

1. Driving rules
2. Water consumption and savings
3. Environment Development
4. Organic farming

The value of education and its significance can be understood from the fact that as soon as we are born, our parents start educating us about an essential thing in life. A toddler starts learning new words and develops a vocabulary based on what his parents teach him. They educate him who is his father, mother, brother, sister, etc. and how to behave with each person giving them due respect. They also impart him priceless knowledge about ethics and morals right from the beginning when he has a tender mind so that these qualities stay with him for his entire life in the form of conditioning.

Education therefore, from pan Africans' congress would eliminate ignorance through teaching and learning which by and large will produce manpower needs of the nation.

The UNESCO report card on education for all (EFA) is stressing the need for the equality of provision of education. In Nigeria, in order to bring about educational equality, the Federal Military Government under the leadership of general Obasanjo (1976) inaugurated the Universal Primary Education (UPE). The programme was designed to provide equal opportunities in education for Nigerian citizens and also another programme Universal Basic education (UBE) was inaugurated by the same Olusegun Obasanjo in the year (1999) with almost the same objectives.

Educational opportunities should equally be given to the citizens irrespective of religion, creed, sect, ideology place of living etc. Islam also explains the importance attached to woman education; it was reported that prophet Muhammad (SAW) said "seek for knowledge even if it takes you to China". In another Hadith he was also reported saying "knowledge is obligatory to Muslims both Male and Female" (salawu, 1996). But women have always been considered inferior to men (Aderlagbe. 1972:136). Academic achievement or performance is a reflective outcome of effective learning and thus it provides information about the academic worth of the learner. It is thus logical to state that for the women folk to be able to carry out social functions that would help in nation building; they must be academically sound and fit. Unfortunately, however women education in Nigeria and in Sokoto State in particular is surrounded by a number of social problems such as culture, misconception of religion, economic background, status of women and parental attitudes toward women education. Women generally represent more than half of the entire world population and that makes their education almost obligatory if the different societies they belong to are to develop. Shehu Usmanu Danfodiyo sets an example by educating his daughters such as Asma'u, Khadijat and Maryam to the extent that they become scholars of outstanding abilities.

Sustainable development can be seen as human capacity building. It can also be defined as economic development without polluting the environment or economic development maintained within acceptable levels of global resource depletion and environmental pollution (Microsoft Encarta, 2007). According to Meena (1994) Sustainable development is a development process which enhances people to create and consume wealth on a lasting basis. She further opined that such development requires among others, economic, political and cultural environment which enables people to engage in and sustain the process.

This research therefore sought to re-examine the educational need of married women for sustainable development in Sokoto State, by identifying some of their problems as well as providing suggestion that can give short and long terms solutions to the problems.

### **Review of Related Literature**

The review of the related literature includes the following areas: They are the need for change in the socio-cultural perception of the status and social roles of women in the society, concept of women education, women education in Islamic perspective, women education in Nigeria, development of women education in Sokoto State, education of married women in Sokoto State and role of married women in ensuring sustainable development.

### **The Need for Change in the Socio-Cultural perception of the Status and Social Roles of Women in the Society**

The social co-existence and relationships of men and women have been variously described and explained. According to castle (1966) women are one half of mankind. The United Nations (1995) described women as homemakers and centers of the family. In the words of Deborah, (1969) women constitute one half of the human population. All these shows the strength of the social factor of women in the society and this explains why they are often described as partners in progress to men. However, through some socio-cultural manipulation women are relegated to a status similar to that of master-servant relationship. They are denied access to many social privileges including education.

### **Concept of Women Education**

Many contemporary analysts examine the process of education itself by considering the characteristics of an educated person. Thus the education process has been described as the international transmission of something worthwhile or desirable in a morally acceptable manner. (Oche, 1988 and peters 1987). Petersgoes further to argue that education is the all-around development of a person physically, intellectually, education as the aggregate of all the process in which a child or young adult develops the abilities, attitudes, and other forms of behavior which are of positive value to the society in which he lives.

Coming to the education of women, It is clear from the above discussion that a good education aims at physical, intellectual and moral development of the individual. Let it be maintained that education is the best legacy any parent can bequeath to the child. Omolu (1972) has clearly pointed out four different but related purposes which women education ought to foster. They are social status: educated woman can her own in any class or society express her opinion freely and contribute her quota to the development of social life in the community. An educated woman is a cultural woman who knows how to behave in a proper manner; she is gentle, polite, and respectful. An educated woman can get good paid job which will enable her to contribute in the up keep and education of her children and can realize the importance of her children education which makes her to be more aware of her responsibilities to her children and her children are in a better position to learn quickly.

### **Women in Islamic Prospective**

A woman in Islam is regarded as an independent perfect member of the society and its places no difference between women and men as far as human virtues are concerned. The prophet(PBUH) was reported saying "If three daughters are born to a person and he bring them up, give them good education and train them in the art of life, I shall myself stand between him and Hell fire". Education as conceived by Islam is not preserve only for one sex. All Human beings without exception have been given the opportunity to learn, understand and utilize all kinds of knowledge. In this context their foreman and woman should be regarded as equal in the field of education economics and politics.

### **Women Education in Nigeria**

According to Praeger (1977:55) Education is considered a fundamental tool, great equalizer of opportunity and perhaps the single most effective upliftment in the modernizing process. It is generally believed that social, economic, political and technological advancement of a nation is to a large extent dependent upon the development of its citizens educationally. Therefore, to build a better future for all citizens one must ensure that every girl-child/woman has not only given the right to be educated but also given the means to be educated (Castle, 1966). Also in the words of Pickhal (1961:44) women are the centers of family, main custodian of cultural, social and fundamental values of the society. No society or community can develop fully without their cooperation, understanding and effective participation. Specifically, women have contributed immensely in nation building in education, agriculture, health care, language politics, tradition and culture.

Women also play prominent roles in the development of states in pre-colonial Nigeria. For Instance during the period of Hausa States and after the Sokoto jihad mention were made of women scholars particularly Shehu Dan Fodiyo,s daughters, namely Asma'u, Khadijat, Maryam etc among women political advisers there was Uwar Kanoand Inna of Gobir. These prominent personalities could not have contributed what they did without some kind of education either formal or non-formal. The importance of women education cannot be over emphasized, education provides them with additional opportunity to contribute meaningful in the social, economic, political and educational spares of the nation's development.

### **Development of Women Education in Sokoto State**

According to Fafunwa (1974), "Western education was introduced in Nigeria by Christian missionaries as far back as 1842. The activities of the missionaries then were restricted in the coastal areas. However, they gradually spread to the hinter land. "They are aimed at teaching children and adult convert how to read the Bible and Prayer Books. Western education was introduced in Sokoto as early as 1903. However, it met a well-established Islamic system of education, as such the missionaries encounter problems in relation to the acceptance of their

system of education except in the pagan areas of Kotoroshi, Tsafe, which are now in Zamfara State.

The first school was open in Sokoto Town in 1905; the school was elementary primary and secondary school for sons of emirs". The school started with four pupils and Muslim teacher who was later sent to England to broaden his experience" (Taiwo 1980). Later the Emir of Gwandu and Tambuwal send their son's, in the year 1907 the pupils population rose to 30 which are all from the ruling families of Sokoto. Gwandu and Argungu emirates.

"Only three schools existed between 1906 and 1936 and by 1939, girl's Western education started at the present Nagarta College Sokoto. The curricular includes reading and writing Vernacular arithmetic, needle work and craft (Badamassi 1967; Fafunwa 1974, Taiwo 1980, Adensina 1985)."

The year 1964-65 was characterized by political tension to educate women, this period witnesses a great concern for women education of both Islamic and Western because of government encouragement and participation. In Sokoto the First Female post primary school was established in 1964, when former senior Girls Primary School was changed to government Girls College (GGC) Sokoto established with the Primary objectives of absorbing girls who completed their primary education from all over Sokoto province (Present Sokoto, Kebbi and Zamfara States). Similarly, co-education in Primary school commenced at the present work department near NEPA office Sokoto (As an elementary school) later a separate girls boarding Primary school was established at Rabah in 1963 with 47 Girls. Girls with good performance were selected and sent to Teachers Training College (TTC) at Katsina which was more equipped with teaching and learning materials (Nduka 1965).

### **Education of Married Women in Sokoto State**

Education is the right of every child, but in most of northern Nigeria, it is more of a privilege, especially for the girls if they are lucky enough to go to school at all, many northern girls are withdrawn permanently from school because of the phenomenon of early marriage after which they soon become mothers. Their low level of education blocks off opportunities for economic, social, cultural and political advancement, trapping millions of women in a cycle of poverty and ignorance. It was to help break this cycle that the Sokoto State government took the innovative step of establishing the women centre for continuing education in November 1997. The aims of the centre is to offer formal education up to secondary school level to women who have either dropped out of formal school or never previously been to school in order words, the center is established to give these two categories of women a second chance. Also many female Arabic secondary schools were established so that the parents will feel safe since the schools are more of Islamic oriented. Among the schools are Hafsatu

Ahmadu Bello Secondary School, Yar Akiya Girls Arabic Secondary School, and Government Girls Arabic Secondary School Sabon Birni etc.

In conclusion the educational disadvantage experienced by women particularly in Northern Nigeria, makes it important to address the factors responsible for unequal opportunity of education. Early age of girls' marriage is one of the fundamental reasons why so many girls drop out of school permanently. There are also the factors of religious misconception, cultural norms etc.

### **Role of Married Women in Ensuring Sustainable Development**

Married women in Nigeria play an important role in ensuring sustainable development of the nation. They possessed some special qualities that are of benefit to the nation if given the opportunity to be educated. Some of the benefits that can be derived from married women education towards a sustainable development are:

**Building a Healthy Family:** The health condition of the family is one of the factors that determine the lifespan of the society. Also the lifespan of the society determines the level of development of that society. Orji (2011) noted that girl education vis-à-vis women education stands one of the potent tools for eradicating girls' vulnerability. A healthy society has also been linked to a wealthy nation. Similarly, Kingdon (2002) noted that doubling the female secondary school enrolment ratio from 19% to 38% in 1975 help to reduce infant death in 1985 by 64%. The education of married women is therefore closely related to raising a healthy generation that would be empowered to contribute significantly to national development. Married women in the society are usually known for their cleanliness and have the capacity of building a healthy nation.

**Management of Resources:** All over the world, women are recognized for their ability to manage the little resources available. Their prudent management of resources helps to reduce wastage and increase economic benefits from available resources, if married women are properly educated, it helps them to put their managerial skills into use and help their husband's in managing the national economic resources for the benefit of the society. (There is a saying that behind every successful man there is a woman). It is therefore advisable that married women should be empowered through formal education on how they can harness their management abilities for the long-term benefit of all citizens of the country.

**Reduced Dependency Rate:** The education of married women will help in reducing the level of dependency on their husbands in particular which will in turn reduce it on the nation in general. The empowerment of married women through education will assist in reducing the pressure on economic resources in the country. This will help to sustain the economic resources in the country towards the path of development. Similarly, empowering women



through education will also enable them to become self-reliant individuals. They would be equipped to learn and develop various means by which they can meet up with personal and societal needs. This will help to reduce the pressure on national resources and reduce dependency level on their husbands.

**Quality Leadership:** According to Shinaba (2008) Abuse of power, violation of human rights, mismanagement of natural resources and underdevelopment are the order of the day for the past four decades that men have been in power. Also the period in which men have been in power have been characterized by gross inequality and violence. However, as managers of the home, it is expected that if women are given opportunity, they will be able to implement their managerial skills in the management of the various sectors of the economy. The quality of leadership That will be provided by women will be such that would be characterized with quality, peace, transparency and protection of human rights. All of these qualities are very important in building stable nation.

**Increase in Gross Domestic Products (GDP):** World Bank in white (2013) opined that if the gap between male and female employment is closed, it will increase the GDP in America by 9%, Europe by 13% and Japan by 16%. If married women are given the opportunity to be educated, it will help to increase the workforce of the nation. Likewise, the activities of married women in the various economic sectors of the nation will have the potential of contributing to an increase GDP. This is because their contribution will help to argument the effort of their male husbands in securing a higher GDP for the nation

### **Methodology**

This research was conducted in Sokoto State women center for continuing education with population of 340 married students and 50teachers, a total of 100 structured questionnaires were distributed. Also regression analysis was used to analyze the questions like the need to develop more time to studies, need to learn how to write well and the need to know more details of each subject. The highest need of students on question 1 which states that Ineed to devote more time for my studies. And it has the mean of1.55, standard deviation of .6235 followed by question 2 which is onthe need to learn how to write well. The above questions were usedto address the research question land the research question 2whichis to ascertain whether there is a significant difference between the educational needs of women in the school who are married and those that are not, was address using a paired sample T-Test as follow the questions as the need to know factors that foster marriage stability, need for financial support towards the study and need on how to cope with all age in study.

The difference between the educational needs of women in school who are married and those that is not married.

VARIABLE	GROUP OF RESPONDENT	N	MEAN	T-VALUE	SIG T
Needs to know factors that foster marriage stability	Unmarried	28	1.2857	18.354	0.00
	Married	59	1.1017		
Needs for financial support Towards the study	Unmarried	27	1.3929	4.429	0.038
	Married	60	1.6949		
Need on how to cope with old age in study	Unmarried	28	1.3214	3.297	0,073
	Married	60	1.2000		

### **Finding**

The social roles of women in the society are socio culturally perceived mainly in terms of norms of domesticity. It reflected the way and manner women are treated by the society. The above observation on the socio cultural perception of the status and social roles of women visa- a- vie the educational implication this perception has posed on women clearly demonstrate the need for women education. Some of the major findings of this work are;

1. There is need for the married woman to be convince that they are not late or too old to study
2. That other domestic work in the home can be well executed if the person doing them is educated. For example, child bearing and rearing, children education supports as well as healthcare.
3. That majority of women that are drop out or did not attend school at all due to early marriage and misinterpretation of religious stands on education of both sexes
4. That women can contribute immensely to the development of their family and society economically, socially and morally
5. That education makes women understand more about religious obligations.

### **Conclusion**

The significant of women education has severally been demonstrated by different scholars. Women have contributed immensely in nation building, education, agriculture, healthcare, language, politics, tradition and culture. They are the center of the family, main custodian of culture, social and fundamental values of the society pickhal (1961: p144). Based on the research, the researcher concludes the following as attained by an educated woman.

1. Economic Development: An educated woman with good paid Job will be in a better position to contribute towards the up keep and education of her children thereby rising their standards. This she can contribute immensely towards the economic development of the country.
2. Realization of the important of children education makes mothers to be more aware of their responsibility to their children.
3. Social status: An educated woman can express her opinion freely and contribute her quote to the development of the social life in the community

### **Recommendation**

The following are recommendations based on the findings of the work. They are:

1. Parents should realize the importance of their female children's education as it helps them in their later lives when they become widow or divorced, they can get good paid job which will make it possible for them to take care of themselves and train their children educationally and in return the children become useful members of the society.
2. The society should encourage the education of women, since they are partners in progress to men and should be given favorable chance to compete with them. By using their talents in the economic development of the society.
3. Husbands also should realize that a woman who is educated is in a better position to cater for the children by making them clean and healthy as well as encouraging them in their schooling by giving them support and helping them to do their homework since she is the one who is always with them.
4. School should also play part, in encouraging the female students, by making them study those subjects with better and higher job opportunities.
5. Government should also encourage women education by providing free scholarship to women education at all level as well as enacting laws that protect women in their educational pursuit.

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## SECURITY MANAGEMENT AND THE CHALLENGES OF BOKO HARAM INSURGENCY IN NIGERIA'S NORTH-EASTERN GEO- POLITICAL ZONE

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### Abstract

*The provision of safety, security and justice to all citizens is important for legitimacy and effectiveness as it helps build the confidence needed to overcome societal mistrust in violence-affected economy. Globally, the strategic nature of security is constantly evolving. From the sea-pirates operating in the horn of Africa to the terror strikes in the North East and the pastoralist-farmers crisis in Nigeria, the security situation in Nigeria has become enormous and embarrassing to government and the society. To curb insecurity, it is imperative to investigate and identify its sources and causes. As such, this paper is designed to access, scrutinize and clarify different causes and sources as well as management of insecurity which affect the sustainable coexistence of the Nigerian state. The theoretical framework for this work is system theory and the method adopted is essentially the content analysis and survey method. This study shows that the barriers affecting sustainable coexistence of the Nigerian state which makes it difficult to tackle the menace of insurgency in the country are but not limited to: Ethno-Religious Conflict, Poor Security System, Insincerity in acquisition of modern day equipment's, Unemployment/Poverty as a social menace that persistently continues to retard the development of the Nigerian Society, the people's belief and personal perceptions, among others. Thus, it is recommending that government should increase the number of well-trained personal and provide them with modern equipment in order to curb the menace of insecurity towards ensuring coexistence of the Nigerian state. Also, there should be periodic seminars and workshops for security personal and the general public to enrich their knowledge and learn new ideas on the modern techniques of combating insecurity as it will be among the ways of ensuring sustainable coexistence of the Nigerian state.*

**Keywords:** Management, Security, Insurgency, Boko Haram, Sustainable, Nigeria and Society.

## **Introduction**

Security is said to mean the quality or state of being secured. It implies freedom from danger, freedom from fear or anxiety and freedom from the prospect of being laid off. Security from these perspective is holistic and encapsulates the total wellbeing of a person in persons (Nwogu 2012). In recent times, insurgency has become a harsh reality in today's Nigeria society; it has come in different forms of manifestations of kidnapping, suicide attacks, self-suicide bombing, corruption, armed robbery and the like e.t.c. (Enders, 2002; Lake, 2000). Several attempts have been made to reduce the inflicts of these insurgency in the Nigeria economy, (Luechinger, 2003); the Nigeria government has tried using a counter insurgent force as policy deterrence, with the imposition of sanctions, to curb actual attempts by putting appropriate measures in place to reduce the menaces of insurgent in the country. Despite these, the level of insecurity in the country is still high, this has made Nigeria to consistently rank low in the Global peace index (GPI, 2012), signifying a worsened state of insecurity in the country. Adagba, Ugwu and Eme (2012), Uhumwuangho and Aluforo (2011) are of the view that the efforts of government have not yielded enough positive result.

However, the outbreak of Boko Haram insurgency in Nigeria marked yet another phase in the recurring pattern that violent uprising, riots and disturbances have become in Nigeria. Given the heterogeneous nature of the Nigerian society, the religious sensitivity of Nigerians, the situation could perhaps not have been different. But what is alarming is the forceful attempt by religious fundamentalist to impose a religious ideology on a constitutionally recognized secular society (Nwogu 2012:43). Boko Haram poses an enormous and complex threat to national security and not only has it been inimical to human security, economic development and political stability, it has also portended harmful ramifications for the corporate existence of Nigeria. Thus, it could be argued that it is the governments' inability to efficiently address poverty and unemployment and other social malaise inimical to the good life that have combined to create an environment in which religious sects like the Boko Haram flourished. Some cases, the situations had gotten worse. (Usman 1987, Ale 2009) posted that the maintenance of law and order in Nigeria has been very challenging to the extent that the ability to manage internal security by security agencies is being doubted by the citizenry. The government which is constitutionally charged to provide security and ensure the welfare of all persons within the polity has although, taken some steps to address these emerging trends of violence and suicide bombings that pose major challenges to security in Nigeria but these efforts have not proven effective. It is against this background that this research is anchored to investigate the effect of security management and the challenges of Boko Haram insurgency in Nigeria's North-Eastern Geo-Political Zone.

## **Statement of the Problem**

Security situation in Nigeria has become enormous and embarrassing to government and the society. Currently, the issue of Boko Haram cannot be over-looked, particularly as it has



become one of the greatest threats to government in Nigeria. The activities of the group threaten the fabrics of Nigeria and are capable of disintegrating the country. It is pertinent to state that Boko Haram has taken a new dimension and has continued to improve on the methods of attacking their targets. It has advanced from the stages of assassination, gunpowder plot to that of bomb-planting explosive attacks, suicide bombing, sporadic shooting in busy areas, including schools, supermarkets, religious places and more recently kidnapping e.g. the kidnap incident of the Chibok school girls, Dapchi school girls and Liya Sharibu that attracted the attention of the international community. Nwogu (2012:43) observed that Boko Haram has grown from an issue of local nuisance to a frontier of international terror. Its rise to international terror group status has been marked by unabated audacious and brutal terror attacks that have shaken the country to her roots. More so, Boko Haram poses enormous and complex threat to the management of national security in Nigeria, which is a major challenge to human security and economic development. Akinferinwa (2011:109) pointed out that Boko Haram is undoubtedly one of the problems in Nigeria. He noted that it is a major component part of the problem. And also stated that, Boko Haramists do play the role of a catalytic agent in the worsening of one Nigeria's main problems; national unity. From this viewpoint, it can be seen that Boko Haram is a serious challenge to security in Nigeria. Apparently, this paper is designed to access, scrutinize and clarify different causes and sources as well as management of insecurity which affect the sustainable coexistence of the Nigerian state.

### **Research Questions**

This paper attempts to ask the following questions:

- i. What are the causes of Boko Haram insurgency in the Nigeria's North-Eastern Geo-Political Zone?
- ii. What are the role-played by security managers in cubing insurgency in Nigeria's North-Eastern Geo-Political Zone?
- iii. What are the challenges associated with security management of Boko Haram insurgency in Nigeria's North-Eastern Geo-Political Zone?

### **Objectives of the Study**

The paper is designed to access, scrutinize and clarify different causes, sources of insecurity and how government manager these insurgencies to maintain a sustainable coexistence of the Nigerian State. Specifically, this paper attempts to achieve the following objectives;

- i. to access the causes of Boko Haram insurgency in the Nigeria's North-Eastern Geo-Political Zone.
- ii. to identify the role of security managers in cubing insurgency in Nigeria's North-Eastern Geo-Political Zone.
- iii. to find out the challenges associated with security management of Boko Haram insurgency in Nigeria's North-Eastern Geo-Political Zone.

## **Conceptual Framework**

### **Concept of Insurgency**

Insurgency according to O'Neil, (1990) is an organized movements aimed at the over throw of a constituted government through the use of supervision and armed conflict. The term insurgency is often used to cover a wider scope of low intent conflict and is often linked inextricably to terrorism as terrorism is a tool that many insurgent groups use to further their agendas. Bernard, (2005), maintains that insurgency is the state of fear or anxiety stemming from a concrete or alleged lack of protection. It refers to lack or inadequate freedom from danger According to Chalk, Byran, Hoffman, and Rosenau, (2001) certain conditions can transform a dissatisfied future of the population into an insurgency, people resist because of the government (or occupying power) or unwillingness to meet the legitimate needs of the population, the lack of government or occupying power and control can be real or perceived. Insurgencies often make use of the media to present the image of an unresponsive or unprepared government. Corrupt and inefficient governments cannot provide basic services, create jobs, encourage growth or improve the lives of the general population, this is why terrorism has become such a popular tool for insurgents; the government's inability to protect its citizens and destroy the insurgents is placed across the pages of the international press and becomes a daily reminder of lack of government control. In addition to the above O'Neil, (1990) gave additional elements that are common to all insurgencies in varying degrees. The combination of these elements determines the overall effectiveness of an insurgency and provides likely targets for counter insurgency efforts. These elements are ideology, organization and goal, environment and geography, the strategic approach (mao'slenin or castro's strategy) phase and external support, e.t.c.

Insurgency is an ambiguous concept. The United States Department of Defence (2007) defines it as organized movement that has the aim of overthrowing a constituted government through subversive means and armed conflict (Cited in Hellesen, 2008:14). This definition suggests that insurgent groups employ unlawful means towards achieving an end, which could be political, religious, social or even ideological. The goal of insurgency is to confront and overthrow an existing government for the control of power, resources or for power sharing (Siegel, 2007:328).

### **Concept of Bako Haram**

The term "Boko Haram" comes from the Hausa word 'boko' meaning "Animist, western or otherwise non-Islamic education" and the Arabic word 'haram' figuratively meaning "sin" (literally, "forbidden"). Boko Haram opposes not only Western education, but Western culture and modern science as well.

Boko Haram, referred to by themselves as al-Wilāyat al-Islāmiyya Gharb Afrīqiyyah (Arabic: *الولاية الإسلامية غرب أفريقيا*, Islamic State West Africa Province, ISWAP) and Jamā'atAhl as-Sunnah lid-Da'wahwa'l-Jihād (Arabic: *جماعة أهل السنة والدعوة والجهاد*, "Group of the People of Sunnah for Preaching and Jihad"), is an Islamic extremist terrorist group based in northeastern Nigeria, also active in Chad, Niger and northern Cameroon (Niworu 2013).

The Boko Haram is largely an insurgent group. Insurgency according to Mohammed (2014) was perpetrated by Boko Haram, an Islamist movement which operated in north-eastern Nigeria and came to prominence in 2009. It was a fringe group under the leadership of Mallam Mohammed Yusuf, a fiery scholar resident in Maiduguri, who had not fully committed to violence before 2009. This therefore supports the argument that:

Through subtle and open harassment, Boko Haram was goaded into an open confrontation with the Nigerian state and violently suppressed in July 2009. Thereafter, it went underground, rebuilt, and resurfaced in October 2010 with a remarkable prison break at Bauchi and has since changed to applying terrorist tactics via targeted assassinations, drive-by shootings, suicide bombings, and massive deployment of improvised explosive devices (IEDs), vehicle-borne IEDs, and, lately, kidnapping and hostage taking (Mohammed in Pérouse de Montclos:2014: 9).

Most of the globally recognized traits of terrorism can be seen in all Boko Haram operations. They are organized, brutal and intentional in all their struggles.

### **Concept of Security**

Security is frequently regarded as a common sense term that can be comprehended by "unacknowledged consensus". Security which signify "state of being secure," originates from Latin *Securitas*, from *securus* "free from care". Furthermore, it was later supplanted by *sikerte*, from a prior obtaining from Latin; prior in the sense "security" was *sikerhede* and *sikernes*.

Security is the protection of the state and its natives against a wide range of damages and issues. The term "security" might be taken as a condition of being shielded from threat or tension. For a nation, security suggests states of peace, steadiness, order and advance. National security cannot be equated to military might, defense or law implementation alone. It goes beyond all of that to accommodate far more reaching issues. The national security of a country determine how the face of the international security would look like. In this manner "National security" can be traced to the Peace of Westphalia where the idea of a sovereign state, governed by a sovereign, turned into the new international order of nation states.

There are plenty of definition in the word 'security'. Buzan (1983) explained security from the stand point of state primary responsibility within the context of human security. In his own view, human security includes political, economic, social and environmental threats. Also, Nwolise (2009) made his contribution that security can be refer to as the "condition of feeling happy and safe from danger and harm". Imobighe said "Security has to do with freedom from danger or with threat to a nation ability to protect and develop itself, promote its cherished values and legitimate interests and enhance the wellbeing of its people. This internal security could be seen as the freedom from or the absence of those tendencies which could undermine internal cohesion and cooperate existence of the nation and itself ability to maintain its vital institutions for the promotion of its core values and socio-political and economic objections, as well as meet the legitimate aspiration of the people, internal security..." furthermore Gwarzo (1998) defined national security as freedom from higher or form of threat to a nations' ability to protect and defend itself, promote its cherished values and interest and enhance the well-being of its people which means that national security is not only restricted to weapons and military preparations but also the well-being of the people as well as any threats to any of these constitute a threat to national security (Jacob, 2009).

### **Concept of Terrorism**

Arab Convention for the Suppression of Terrorism: (1998). terrorism is "any act or threat of violence, whatever its motives or purposes, that occurs in the advancement of an individual or collective criminal agenda and seeking to sow panic among people, causing fear by harming them, or placing their lives, liberty or security in danger, or seeking to cause damage to the environment or to public or private installations or property or to occupying or seizing them, or seeking to jeopardize a national resource." League of Nations Convention Definition of Terrorism (1937): terrorist acts are "all criminal acts directed against a State and intended or calculated to create a state of terror in the minds of particular persons or a group of persons or the general public."

Terrorism according to Ekaterina (2008), is a sort of violence that uses one-sided violent approach against civilians. It also engages uneven violent confrontation against a stronger adversary, which could be a state or a group of states. Chomsky (2001) defines terrorism as "the use of coercive means aimed at populations in an effort to achieve political, religious or even other aims". The US State Department defines terrorism as "premeditated, politically motivated violence perpetrated against non-combatant targets by sub-national groups or clandestine agents, usually intended to influence an audience" (cited in Isyaku, 2013). The United Nations (1992) defines terrorism as "an anxiety-inspiring method of repeated violent action, employed by semi- clandestine individual, group or state actors, for idiosyncratic, criminal or political reasons. For Lesser (1999:6), international terrorism can be referred to as an act in which terrorists cross national borders perpetrate attacks within the territory of other states. The targets of attacks could be embassies, individuals, schools, government parastatals,

security institutions, international organizations, et cetera. Terrorists could also hijack ships on the high sea and planes in the air. Therefore, terrorism is an act aimed at achieving social, political, religious, economic and even psychological goals through the use of coercive and intimidating acts outside the context of legitimate warfare activities that conveys some forms of messages to an audience. In view of this, various authors use terrorism and insurgency interchangeable but terrorism attack is more deadly than that of insurgency in areas of confrontation towards government and their ideology.

### **Some causes and sources of insecurity which affect the sustainable coexistence of the Nigerian state**

The causes of insecurity are as follows:

#### **i. Ethno-religious conflicts**

Among the various ethnic groups and religion in Nigeria there is arisen distrust and lack of confidence. According to Hazen & Horner (2007), Salawu (2010) and Igbuzor (2010), ethno-religious conflict is a major source of insecurity in Nigeria. Frequent and persistent ethnic conflicts and religious clashes between the two dominant religions - Islam and Christianity present the country with a major security challenge. In every part of Nigeria, there exists ethno-religious conflict which according to Ibrahim & Igbuzor (2002) have arisen as a result of new and particularistic forms of political consciousness and identity often associated with ethno-religious identities. As Adagba et al (2012) have noted, claim over scarce resources, power, land, chieftaincy, local government council, control of markets and sharia among other trivial issues have resulted in large scale killings and violence among groups in Nigeria.

#### **ii. Weak security system**

This arises from inadequate equipment for the security arm of government both in weaponry and training. This is in addition to poor attitudinal disposition of security personnel. In most cases, security personnel lack the expertise and equipment to handle such situations in a way to prevent them from occurring. Even when this exists, some personnel get influenced by ethnic, religious or communal sentiment and are usually swallowed by their personal interest to serve their people, rather than the nation. People as a result become saboteurs of government effort by supporting and fuelling insecurity through either lacking vital security information or aiding and abetting criminals to acquire weapons or to escape the long arm of the law.

#### **iii. Unemployment/poverty**

As a result of high level of unemployment and poverty among Nigerians, particularly the youths, they are adversely attracted to violent crime. Adagba, Ugwu and Eme (2012), Nwagboso (2012) noted that the failure of successive administrations in Nigeria to address challenges of poverty, unemployment and inequitable distribution of wealth among ethnic nationalities are the major causes of insecurity in Nigeria.

#### **iv. Weak Borders**

One major immediate factor which has enhanced insecurity in Nigeria is the porous frontiers of the country, where individual movements are largely untracked. The porosity of Nigeria's borders has serious security implications for the country. Given the porous borders as well as the weak and security system, weapons come easily into Nigeria from other countries. Small Arms and Light Weapons proliferation and the availability of these weapons have enabled militant groups and criminal groups to have easy access to arms (Hazen and Horner, 2007). Nigeria is estimated to host over 70 percent of about 8 million illegal weapons in West Africa (Edeko, 2011). Also, the porosity of the Nigerian borders has made it possible for unwarranted influx of migrants from neighbouring countries such as Republic of Niger, Chad and Republic of Benin (Adeola and Oluyemi, 2012). These migrants which are mostly young men are some of the perpetrators of crime in the country.

#### **Strategies for addressing the menace of the Boko Haram Insurgence by security management**

Boko Haram's activities in *Nigeria's North-Eastern Geo-Political Zone* have blighted the lives of millions of Nigerians since 2009. The indifference which for years exemplified the government's response to the insurgency is increasingly being challenged. Amid proclamations of security victory, federal, state and religious authorities need to do far more if they are to consolidate gains and realise the objectives set out in "The Buhari Plan" for rebuilding the northeast. The strategies are as follows;

1. **Recognition of Boko Haram:** The Nigerian government must recognise that Boko Haram does not comprise ignorant fanatics, but rational and strategic individuals who remain capable of threatening the unity of Nigeria. Interviews with alleged Boko Haram members in custody indicate that although they lack Western education, the majority possess a capacity for critical thinking. This, combined with their knowledge of the local environment, has proved extremely potent. Better understanding of the group must form the basis of all military, political and legal engagement (*Barkindo, 2017*).
2. **Reconstruction:** The adherence of all state authorities and local politicians to the immediate reconstruction of schools, hospitals and other basic infrastructure destroyed during the conflict is essential. In Borno, Yola and Adamawa states efforts to clear landmines and unexploded bombs should be undertaken before displaced communities are asked to return home. These efforts would not only support communities returning to restart cultivation but would be a first step in the long process of re-establishing the state as a provider of services to citizens in the region (*Barkindo, 2017*).

3. **Open channels of dialogue:** Federal and state government(s) should support efforts to co-ordinate local community dialogue. There must be open channels of communication between Christians and Muslims, and between victims and perpetrators. Initiatives should be designed to ensure that women and youth are active participants and have their voices heard; they could be led by women's groups, local authorities (such as traditional rulers and religious leaders that still have the respect of local communities), and civil society groups with established structures, capacity and credibility(*Barkindo, 2017*).
4. **Creating a Ministry of Northern Affairs.** Just like the Ministry of Niger Delta Affairs – to help address the numerous challenges in the north, including the problems of poverty, unemployment, illiteracy and radical Islam. This establishment would be one way of winning the hearts and minds of the locals and cooling local grievances on which Boko Haram feeds.
5. **Understand how Boko Haram communicates:** Despite its rejection of all the manifestations of globalisation, Boko Haram has effectively exploited modern technology for mobilisation and recruitment. The group has multiple factions, dispersed leaders and many sources of funds: technology underpins its ability to operate. Nigeria's government and security agencies should carry out intensive analysis of the group's use of information technology, its technological capacity, how it channels its messaging both at home and internationally. This would provide valuable insights that can be used to counter Boko Haram.
6. **Conducting speedy and fair trials, under Islamic laws, of those found to be Boko Haram activists or funders and letting the law have its full course.** Having suspects stand for trial for months or even years creates a backlash, and often has a way of mobilizing sympathy for the suspects. It may also be strategic to try the suspects under Islamic laws since the sect members have openly rejected Western civilization, including its jurisprudence. Whatever punishment is meted to them under Islamic jurisprudence will not be seen as part of Western conspiracy against Islam.
7. **Instituting a sort of Marshall Plan for the northeast aimed at winning the hearts and minds of the local populace.** The plan should aim at providing quality education, building local capacity and providing jobs.
8. **Exploring the option of offering amnesty** to the more moderate members of the sects while side-lining the hardliners and finding means to effectively neutralize them.

### **Roles to be played in cubing insurgency in Nigeria's North-Eastern Geo-Political Zone**

The roles of the stakeholders in the security management model are discussed below:

#### **The Role of the Government**

To overcome insecurity there is need for intelligence gathering and surveillance so that law enforcement agents could be proactive and reasonably predict potential crime with near perfect accuracy rather than being reactive. As noted by Adagba, Ugwu and Eme (2012) the menace of insecurity no doubt calls for a new approach that will be founded on credible intelligence gathering". Government must not only continue to engage the security personnel, it must, more than ever before, recognize the need to devote more attention to security intelligence, capacity building to meet the global best practice standard and acquisition of modern technology. Although, the Nigerian government has resolved to adopt the use of Computer-based Closed Circuit Television cameras in public places especially in Abuja to monitor and record events that take place in a particular location, (Ogunleye, Adewale, Alese and Ogunde 2011) have argued that for it to be effective, government must ensure that the scheme is well managed, the cameras should be recording, with good quality images, and any incident caught on camera should be followed up by the police or other appropriate authority. Computer-based Closed Circuit Television cameras are cameras used to monitor and record images of what takes place in specific locations in real time. The images collected are sent to a monitor and recorded on video tape or as digital information. It is a surveillance technique that aims to prevent crime by increasing the perceived risks of potential offenders in engaging in criminal acts. They can be very effective in maintaining security through incident reduction or post-incident analysis, to act as a deterrent or to provide valuable support to security.

#### **The Role of Civil Society**

Civil society is the arena outside of the family, the state, and the market where people associate to advance common interests. It is the aggregate of non-governmental organizations and institutions that manifest interests and will of citizens or individuals and organizations in a society which are independent of the government. As a result of the inability of government to provide adequate security, Ebohon, and Ifeadi, (2012) are of the opinion that Nigeria should move from a state-centric to a human security paradigm, move from an elite centered to a people centered security management approach and involve civil society in the state security project. There is need for civil society to advance the importance of security in Nigeria. With the active involvement of civil society in security management, we should have less violence, human rights abuses and social injustice. One of the roles of civil society is to convince other stakeholders that action is better than inaction and that insecurity does not have to be accepted as a necessary evil. They have to play the roles of critic, catalyst and advocate of those interests. It is also essential to raise public awareness, to awaken society to the disastrous effects of insecurity and to get across the message that fighting it is possible. In many countries, civil society is the watchdog and the vanguard to warrant that other



stakeholders respect their boundaries. They also play a major in the area of raising public awareness as well as in lobbying for concrete change or in helping to initiate and carry out a process of reforming national integrity.

### **The Role of Religious Groups**

The two main religious groups in Nigeria have a major role to play in ensuring security in the country. The teachings of religious groups are one of the bases of value development in the contemporary world. The role of values in human security cannot be over emphasized. It is a known fact that values govern behaviour. Where social values and norms concerning fundamental human right in both public and private places have been distorted and violated, the people and government tend to live in an atmosphere of instability and insecurity (Clifford, 2009). If every religious group can tolerate the other, then religious crisis which has been a problem in this country will be abated. In addition, worship centres should not be used as avenue for instigating members to be violent or to engage in activities that can affect the peace of the country.

### **The Role of Communities**

It is important to note that security management can be significantly aided by the cooperation of local communities. Depending on our perceptions and sincere feelings as regards our collective responsibilities towards lasting peace in Nigeria, communities should strive to live peacefully with other communities. They should also be vigilant of strangers in their localities to ensure that criminals do not have easy access to their communities.

### **The Role of Individuals**

Security should be seen as everybody's business. As individuals we need to cultivate the habit of security consciousness and to report any security situation to the appropriate authority (not only the police) immediately. Every individual must evince a high level of security awareness and alertness. This is because individuals understand their communities better and any report of suspicious behaviour or activity could lead to actionable intelligence leading to disruption of attacks. Through the early detection of impending conflicts and its prevention, it will help to provide a safe and enabling environment for the people to operate in, and for economic development to thrive.

### **Theoretical Framework**

The theory guiding this work is systems theory. The system analysis of the political system popularized by David Easton is adopted as a theoretical approach underpinning the study. The system theory is an analogy that shows a collection of interrelated parts which forms some whole. The idea is that if all the parts are working effectively the overall objectives can be achieved. A system can be open or closed. Nigeria is an open system. A key feature of open systems is their interdependence on the environment which may be relatively stable or

relative uncertain at a particular point in time. This feature is of considerable importance to political and economic system which needs to adapt to the changing environment if they are to flourish. Nigeria needs the Northern economy to achieve her economic objectives. The focus of the approach is on the analysis of factors and forces that engender stability and instability in the political system strengthens its relevance to explaining the deep linkage between the dysfunctionality in governance and the challenges of poverty, inequality and insecurity in Nigeria. The political system within the Eastonian framework is an input and out-put mechanism which deals with political decisions and activities and performs integrative and adaptive functions relevant to the transformation of the society (Johari, 2011). Moreover, the mix of the environment, citizens' demand and support (inputs), and the policy output from the system are core factors that affect the structures and processes involve in the authoritative allocation of values and are thus fundamental to the stability and survival of the political system (Johari, 2011).

The centrality of citizens' demand and support (inputs) and policy output to the failure of democratic governance in Nigeria and the attending social tensions and security threats it provokes is the major concern of the study. The inputs in the political system according to Easton consist of citizens' demands on the polity and the support they extend to the system. Supposedly, inputs in this context refer to those demand made by the Boko Haram. Demands made upon the political system by the political elites and leadership is with-in inputs. Meanwhile, supports entail the structures that enable the political system to manage demands put on it, while outputs relate to those demands that are converted into authoritative policies and decisions. Importantly, obtaining a balance among these critical variables of the political system is germane to its capacity to overcome inevitable challenges pose by the various forces from within, as well as the maintenance of stability and survival of the polity. Conversely, the inability of the political system to address critical demands from the Boko Haram, or respond positively to important feedback from its policy outputs have the capacity to undermine support for it. Moreover, intra-elite conflicts regarding policy articulation or allocation of scarce resources, preference for elites demands and inability of the structures and institutions of the system to manage citizens' demands equitably can engender popular distrust, instability and stresses of the political system (Johari, 2011).

### **Methodology**

The method adopted is essentially the content analysis and survey method. The population of the study comprise of following *states*: Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe which made up the Nigeria's North-Eastern Geo-Political Zone. It occupies slightly less than one-third of Nigeria's total area and had a projected *population* for 2011 of 23,558,674. The technique used in drawing the sample size is Taro Yamane (1967) formula defined as:

$$n = \frac{N}{1+N(e)^2}$$

Where n = sample size

N = total population size

1 is constant

e = the assume error margin or tolerable error which is specified as 5% (0.05) in this study.

$$n = \frac{N}{1 + N(e)^2} = \frac{23,558,674}{1+23,558,674 (0.05)^2} = \frac{23,558,674}{58896.685} = 400$$

The sample size of 400 was chosen to effectively carry out the research study. This is capable of providing an effective study devoid of size complexity and other inconsistencies.

The respondents were purposely sampled because of their participation and experience in security management in the North East geopolitical zone of the country.

Bases on this distribution sample size, the questionnaires were distributed in such a way that the entire security agent were represented and the Purposive Sampling Techniques, was used to select the different categories of the respondents from the security agencies in the study area to include; 35 Nigerian Army, 35 Nigeria Police Force, 35 Nigeria Security and Civil Defence Corps, 35 Nigeria Immigration Service, 35 Nigeria Prisons Service, 35 Federal Fire Service, 35 Nigeria Customs Service, 35 Federal Road Safety Corps, 35 Nigerian Navy, 35 Nigerian Air Force and 35 Security State Service while the remaining 15 respondents was drown from the local vigilante group members because of their participation, interactions and experience with the security agencies in their areas towards the management and control of Boko Haram insurgency. For the purpose of this research study, data were collected from two main sources which are primary and secondary source of data.

### Data Presentation and Analysis

Bases on the 400 questionnaires administer and interviews conducted only 327 were returned representing 81.75% of the targeted population, while 73 questionnaires were not returned representing 18.25% of the entire study population.

**Table 1:** Are there factor(s) responsible for the Boko Haram insurgency in Nigeria’s North-Eastern Geo-Political Zone?

Option	Number of respondent	Percentage%
Yes	239	73.1%
No	88	26.9%
Total	327	100%

**Source:** Field Survey, 2019.

A critical look from the above table revealed that 239 respondents representing 73.1% agree that there are factor (s) responsible for the Boko Haram insurgency in Nigeria’s North-Eastern

Geo-Political Zone, while 88 respondents representing 26.9% said no that there are no factor(s) responsible for the Boko Haram insurgency in Nigeria’s North-Eastern Geo-Political Zone.

**Table 2:** Factors influencing Boko Haram insurgency in Nigeria’s North-Eastern Geo-Political Zone

Option	Number of respondent	Percentage %
Religion, Ethnicity the people’s belief and personal perceptions.	93	28.4%
Unemployment/Poverty	81	24.8%
Poor Security System	78	23.9%
All of the Above	75	22.9%
Total	327	100%

**Source:** Field Survey, 2019.

From the above table 2, 28.4% of the respondents which are made of 93 respondents who are the majority said that Religion, Ethnicity the people’s belief and personal perceptions is the factor influencing Boko Haram insurgency in Nigeria’s North-Eastern Geo-Political Zone, 81 respondents representing 24.8% said that the Unemployment/Poverty is the factor influencing Boko Haram insurgency in Nigeria’s North-Eastern Geo-Political Zone. On the other hand, 78 respondents, representing 23.9% of the sample population are of the different opinion that Poor Security System is the factor influencing Boko Haram insurgency in Nigeria’s North-Eastern Geo-Political Zone, whereas 75 respondents representing 22.9% of the entire population said that all of these factors are responsible for book Haram insurgency in the country. This finding is collaborated with the interview conducted with Usman Dalami, Abubakar Toro and Jafaru Mohammed among others (22/5/2019) of the Nigeria Army said that most of the time the perpetrators claim that religious belief, poverty and because nothing for them to do has been the reason why they mostly join the Boko Haram group.

**Table 3:** Roles played by security managers in cubing insurgency in Nigeria’s North-Eastern Geo-Political Zone

Option	Number of respondent	Percentage %
By developing policy that promote peace and unity in crisis region	116	35.5%
By empowering the state governments to fight against Boko Haram	132	40.4%
Exploring the option of offering amnesty to the more moderate members	79	24.1%
Total	327	100%

**Source:** Field Survey, 2019.

From the above table 3, 35.5% of the respondents which are made of 116 of the respondents are of the view that the government need to develop policy that promote peace and unity in crisis region towards regulating Boko Haram Bombardment in the Country, 132 respondents representing 40.4% said that the government need to empower the state governments to fight against Boko Haram for it is the sure way towards regulating insurgency in Nigeria’s North-Eastern Geo-Political Zone, whereas a 79 respondent representing 24.1% said the government need to Exploring the option of offering amnesty to the more moderate members.

**Table 4:** Challenges associated with security management of Boko Haram insurgency in Nigeria’s North-Eastern Geo-Political Zone

Option	Number of respondent	Percentage %
Insincerity in acquisition of modern day equipment’s	115	35.2%
Ethno-Religious Conflict	81	24.8%
Poor Security System	76	32.2%
Bad governance	55	16.8%
Total	327	100%

**Source:** Field Survey, 2019.

From the table above, 115 respondents representing 35.2% affirmed that the Challenges associated with security management of Boko Haram insurgency in Nigeria’s North-Eastern Geo-Political Zone is due to insincerity in acquisition of modern day equipment’s, 81 respondents representing 24.8% said that the Challenges associated with security management of Boko Haram insurgency in Nigeria’s North-Eastern Geo-Political Zone is due to Ethno-Religious Conflict. However, 76 respondent representing 32.2% of the sample population said that the Challenges associated with security management of Boko Haram insurgency in Nigeria’s North-Eastern Geo-Political Zone is due to the Poor Security System in the country, where as 55 representing 16.8% said that the challenges face in implementing policies against terrorism is due to the bad governance in the country.

### **Conclusion and Recommendations**

This study declared that insurgency, is hazardous and holds many negative effects on individuals, families and the society as a whole. The study reveals that security manager’s failure in tackling the menace of insurgency on Nigerian society leads to insecurity of lives and properties, loss of human resources, reduction of the level of development, unemployment, permanent disability on the victims and poverty. This study shows that the barriers affecting sustainable coexistence of the Nigerian state which makes it difficult to tackle the menace of insurgency in the country are but not limited to: Ethno-Religious Conflict, Poor Security System, Insincerity in acquisition of modern day equipment’s, Unemployment/Poverty as a social menace that persistently continues to retard the development of the Nigerian Society, the people’s belief and personal perceptions, among

others. There is an urgent need for the Nigerian government to take a decisive step to tackle the problem of insurgency and other related criminal activities across the country.

There is need as a matter of priority for government to meet the following recommendations.

- i. Nigerian government should have established high trust of equity and equality environment among the two dominant religions within the zone and the entire country at large. Also, all Nigerians citizens should volunteer information that could lead to arrest of suspected Boko Haram members. The police on the other hand must establish an improved friendly relationship with the public so that members of the public can be able to volunteer information confidentially. Such volunteers or agents must not be exposed by the police because they may be targeted by armed criminal gangs. Security involves both the police (other security agents) and the public.
- ii. Government should increase (recruit) the number of well-trained police and provide them with modern technical equipments such as helicopters, effective communication devices, surveillance cameras, sophisticated arms and ammunitions, trained dogs, adequate patrol vehicles, etc. This will boost their morale in combating armed robbers more effectively. If such equipments are provided and the police salaries and allowances are increased, the police will be motivated to combat crime assertively and improve their performance. Government should periodically organize and send security personnel into national and more advanced countries of the world for training, seminars and workshops. As these series of training, seminars and workshops will provide opportunity for officers to enrich their knowledge and learn new ideas on the modern technique of combating crimes and insurgence.
- iii. Government should also engage in a serious pragmatic revolutionary economy recovery to create jobs opportunity to engage the abandoned young graduates who are roaming on the streets doing nothing. "An idle man is a devil workshop".
- iv. The Nigeria border should not only remain closed but be strictly and surveillance regularized to avoid illegal proliferation of small arms and light weapons.

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## ANALYSIS OF STRATEGIC MARKETING AS CRITICAL TOOL FOR ENTREPRENEURIAL SURVIVAL: A STUDY OF TOPTREE OIL MILLS NIGERIA LIMITED, ABA, ABIA STATE

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### Abstract

*Entrepreneurship engagements have continued to encounter difficulties in coping with turbulent economic environment. The global economic crisis worsened the state of affairs culminating in the collapse of many companies. In spite of these challenges, some entrepreneurships still thrive. This paper is focused on the entrepreneurship survival strategies of organizations with focus on Top Tree Vegetable Oil company, Aba, Abia State. A descriptive survey of the company reveal that adoption of corporate strategy, stretching of core competences and distinctive capabilities remain the hallmarks of entrepreneurships which thrive in spite of turbulence in the business environment. Recommendations are made for the adoption of integrated plans and innovative activities, formulation of long term goals as well as development of reputation for quality goods and services. This paper has implication in public policy formulations for business growth and development in Nigeria and the developing countries.*

**Keywords:** *Entrepreneur, Entrepreneurship, Strategy, Strategic Marketing, Economic environment, core competence, distinctive capability*

### Introduction

An entrepreneur is a risk taker, who is able to utilize the opportunity available in creating something of value within the limits of resources available. Entrepreneurship occurs when an individual or group develops a new venture, or a unique way of giving the market-place a product or service by utilizing the opportunities within their immediate environment under conditions of uncertainty.

Entrepreneurial efforts could be traced to the stone age when individuals struggled out of ingenuity to use special stones to ignite fire for the purpose of cooking and heating. In Nigeria,

many people from various tribes, out of their God-given talents, created many things of value for the populace. People engaged in ventures like goldsmith, blacksmith, leather craft, etc. However, the civil war in Nigeria ignited the spirit of survival and ruggedness of the citizens, particularly the Igbos living in the Eastern part of Nigeria. Thus the efforts of the Igbos and others yielded results in the area of creativity and entrepreneurship. These efforts, in the mist of global challenges, coupled with technological advancement have resulted in the establishment of various forms of companies by entrepreneurs - the drivers of entrepreneurship. There are notable entrepreneurial activities in cities such as Lagos, Aba, Nnewi, Onitsha, Kano, Kaduna, Port Harcourt, Warri, Benin, Ajaokuta and other parts of the country. These cities have been noted for the production of most household, industrial and general goods in Nigeria. The companies engaged in the production of goods and services exist in categories ranging from small, medium to large enterprises.

In analyzing the existence, survival and collapse of these enterprises, many strived, while some fizzled out shortly after they were established. Others died natural deaths due to various reasons. It is important to note that the stories about these companies in Nigeria cannot be complete without an in-depth analysis and clear demarcation between those in very bad shape and those who still strive amidst challenges in the environment. The question on the lips of some observers remains: why do some companies survive turbulent economic situations and environmental changes while others do not? The foregoing brings to the fore, the main interest in this paper, analysis of strategic marketing as critical tool for entrepreneurial survival. The aim is to identify the entrepreneurial survival model in our turbulent times.

### **Statement of the Problem**

To survive turbulent times is the hallmark of a proactive, well positioned entrepreneurship organization. To achieve this, entrepreneurs combine the resources at their disposal in unique ways to deal with the current and future challenges facing them. In Aba, Abia State, the economic crisis of 2008 affected many companies, culminating in their death. Few companies survived the crisis, among which is Top tree Oil Mills Industries Limited (Okeke, 2009). It is pertinent therefore, to ask whether the secret of survival lies in the strategic marketing employed by individual companies. This paper, therefore, is centered on the Analysis of Strategic Marketing activities of entrepreneurial organizations with particular focus on Top tree Oil Mills Nigeria Limited, Aba, Abia State. The focus of the paper is to find out if survival in similar organizations is attributed to strategic marketing employed.

### **Objectives of the paper**

The general objective of this paper is to identify critical strategic marketing options for entrepreneurial survival with a view to contributing to economic development in Nigeria. The specific objectives of the paper are:

- i. To critically examine how entrepreneurship organizations, survive in a turbulent business environment.
- ii. To ascertain if strategic marketing employed affects the fortunes of business organizations.
- iii. To develop a model for entrepreneurial success from (i) and (ii).

### **Significance of the paper**

Since the paper deals with Analysis of strategic Marketing as critical tool for entrepreneurial survival, it is hoped that the gains of the strategies employed by Top tree Oil Mills Nigeria Limited would serve as a model for similar organizations. It would provoke studies into the strategic marketing activities in other areas of enterprise in Nigeria. It would also serve as resource material to students, lecturers and other members of the public. The government of Federal Republic of Nigeria could also borrow the suggestions in policy formulations relating to industrial development in Nigeria and other developing counties.

### **Profile of Toptree Oil Mills Nigeria Limited**

The company is a partnership organization. It is owned by four individuals. Toptree Oil Mills Nigeria limited started business operation in 1988 at KM5 Umuahia- Port Harcourt Expressway, Osisioma, Aba. Its initial business was the refining of Crude Palm Kernel Oil (CPKO) into vegetable oil. Its refinery capacity is 100 metric Tonnes/day. Actual refining business started in 2002. Today, the company has diversified its business including solvent extraction, soap making, bulk oil sales and packaged oil in jerry cans. Toptree oil mills has a new 300 metric Tonnes/day additional plant. The aim of this additional plant is to enable the company to buy crude palm kernel (CPK) from any source (Local and foreign), crush, extract its crude oil and refine it in her refinery. This is to ensure steady and continuous production in her refinery.

This attempt is Toptree oil mills' 1<sup>st</sup> step towards backward integration policy. Toptree oil mills also has a 2.5 metric tonnes/hour soap plant.

The company has an Indian as Managing Director. She also has two Assistant General Managers in technical and marketing, administrative managers, personal assistant to the chairman, ten (10) assistant managers, and 100 (one hundred) support staff including casuals in production, packaging, stores, loading and off-loading, way bill etc.

### **Toptree Oil Mills Production Process**

- i. **Vegetable Oil:** The company has a tank farm from where crude palm kernel oil (CPKO) is drawn to the refining plant. At the refinery, the technical teams are on hand to add all necessary additives. Under set temperature and pressure the crude palm kernel oil is refined into vegetable oil. The vegetable oil also passes through the pipelines into storage tanks marked out for it in the tank farm.

- ii **The Soap Production Process:** Soap is made from Red Palm Oil or Tallow (Animal fat). Each of these has various tanks in the tank farm where it could be drawn. When tallow is used, it is drawn from the tank farm to the boiling pot in the production floor. When the tallow is boiled to a set temperature and pressure, it passes through the dryer. At the dryer, certain colours and perfume are added before the dry soap moves through the conveyor to the cutting section. The wrappers and packers are on hand to tidy up the production process at this point.
- iii. **Products of Toptree Oil Mills:** The products of the company include: Toptree vegetable oil, Toptree crude palm kernel Oil (PKO), Toptree palm kernel cake (PKC), Toptree brands of soap (Laundry) - sky and Wiper brands.
  
- iv **Strategic marketing Activities of Toptree Oil Mills Nigeria Limited**
  - a. Employment of expatriate managing director
  - b. Diversification/Expansion projects leading to Extraction, refining and packaging of products.
  - c. Employment of Foreign technology through solvent extraction (technology transfer)
  - d. Production and sales of multiple products in Bulk (use of distributors) and Retail sales.
  - e. Payment of commission on sales to distributors and marketers.
  - f. Access to both foreign and domestic loan facility E.g. European Investment Bank (EIB), Nigeria Agricultural Credit and Rural Development Bank (NACRDB), Bank of industry (BOI), Diamond and Access Banks, etc.
  - g. Local and foreign access to raw materials
  - h. Production of high quality products
  - i. High Production capacity advantage - 300 metric Tonnes/day solvent plant.
  - j. Export advantage (Palm kernel cake-PKC, soap and vegetable oil -core competence.
  - k. Employment of highly qualified work force and exposure to foreign and local training.
  - l. Good corporate social responsibility - employment of indigenes of local environment (Osioma Ngwa) and provision of scholarship to indigenes and recognition of traditional institution.

## **Conceptual Review**

### **Entrepreneurship**

The word entrepreneur is viewed from different angles by different authors. But all the definitions or descriptions contain similar concepts such as risk-taking, organizing, creating wealth, initiative and newness. Hence, (Imaga 2002) defines an entrepreneur as someone who brings things like money, materials and labour together in new business, productive process or improved organization to ensure business success by perhaps creating something new. Act of creating or innovating usually requires exceptional determination as well as acumen, initiative and creativity which need not be innate or inborn but must be fuelled by the desire to out compete others, excel or to change a stagnant situation. (Udu, Udu, and Eze, 2008), see

entrepreneurs as those who have insatiable desires for accomplishment of anything that fascinates their mind (idea) which requires single-mindedness and an obstinate refusal to give up, even when the situation looks impossible.

Entrepreneurs, are therefore, those who see visions and translate their visions into economic and commercial activities that are capable of enhancing the well-being of the citizens. (Udu, et al, 2008).

Okenwa (2005) asserts that an entrepreneur is an individual who is willing and able to take risks with the aim and objective to maximize profit. This brings to bear the fact that an entrepreneur invests money, effort and time on a business in order to make profit. He/she is therefore, business minded. Such should be able to see and evaluate business opportunities and gather necessary resources and to initiate appropriate actions in order to bring about success of the business venture.

Given the above background, Okenwa (2005), posits that entrepreneurship is an activity that has to do with the identification of investment opportunities, establishment and promotion of a business. It is indeed concerned with the ability to pool various scarce resources, the organization and management of human and material resources for the realization of the corporate goals of an enterprise, risk bearing, innovation and change. Gana (2001) stated that entrepreneurship is the willingness and ability of individuals to seek out investment opportunities in an environment and be able to establish and run an enterprise successfully based on identified opportunity.

Agu (2001) identified entrepreneurship characteristics as follows:

1. Risk taking
2. Self-confidence
3. Personality and perseverance
4. Opportunity seeking
5. Systematic planning and goal setting
6. Sense of achievement
7. Human relations and persuasive skills
8. Information seeking.

Lie (2003) quoting Kirby (1971) defines entrepreneurship as willingness and ability of an individual to seek out investment opportunities, establish and run an enterprise successfully. Stone and Freeman (1992) see entrepreneurship as the seemingly discontinuous process of combining resources to produce new goods and services.

## **Marketing**

Marketing is the business function that identifies current unfulfilled needs and wants, defines and measures their magnitude, determines which target markets the organization can best serve, and decides on appropriate product, services and programmes to serve these markets, (Kotler, 1984). What then is marketing concept? Kotler (1997) asserts that “the key to achieving organizational goals consists of being more effective than competitors in integrating marketing activities toward determining and satisfying the needs of a target market.

The consumer’s satisfaction is maximized by providing goods and services that match his or her needs while at the same time, the market maximizes his profit for serving the needs or market. Hence, Davidson (1997) in his text “offensive marketing” argues that a firm’s orientation should be to build superior customer value for above average profit

## **Strategy**

Change is inevitable in every organization. Managers/ entrepreneurs are adopting to changing marketing conditions and at the same time facing the need for creating an “anticipative” rather than a “reactive” managerial system. These managers are continuously searching for ways to manage an increasingly complex technology and markets as well as more sophisticated work force in an environment that is continuously in a state of flux. A static organization can no longer be feasible under this situation. To meet the challenges and continuously create goods and services that meet the taste of consumers, entrepreneurs have created various strategies. A well-defined strategy helps in the development of organization goals and objectives. Nnedu (1995) maintains that strategy points out the way to achieve corporate goals and is designed with those goals in mind. Hence; a market place is like battle field with firms designing their various strategies with a view to remaining dominant in the market.

Thompson and Strickland (1981) discussed a number of strategic options that an organization can use to compete effectively in its own market. The use or adoption of these strategies is however dependent on the level of market share the business is enjoying. Some of these strategies are:

- A. **Strategies for low- market share business:** Here, the market share is below the share of the market leaders. Business under this category can operate effectively by adopting any of the following strategies.
  - i. The unsatisfied niche strategy- which calls for the targeting of market segments that have not been attended to by the industry’s players.
  - ii. Specialist strategy- which advocates the concentration of business on a particular product/service so that the firm will improve and serve its markets more effectively.

- B. **Strategies for the Dominant Business:** These are businesses that enjoy relative high market share in the industry. Strategic options open to these businesses are:
- i. Offensive Strategy- which preaches continuous innovation and creativity to remain dominant in the market place.
  - ii. Fortification strategy – which enjoins the firm to protect its chief products with patents and generally make entry into its market difficult for smaller ones.
  - iii. Maintenance strategy – this is the strategy to maintain its current level of market activities.
- C. Other classes of business that could require distinct strategies are business in growth market. Organizations in alternative growth strategies usually watch out for opportunities, engage in product innovations. Business in mature to declining industries deserve special strategies to rescue them.

Organizations here, could exploit any opportunities in the industry, through product and market diversification strategies, quality improvement, product innovations and price-off promotion strategies.

It is to this that our focal firm belongs.

Anyanwu (1999) maintains that the organizational strategy and product mix strategy could be affected by the behavior of consumers in a particular business environment. It is equally noteworthy that the market size, scope, nature and location also affect strategy. Firms serving large market will employ strategies that will guarantee coverage of its markets.

Other strategies could be affected by market structure and behavior. A monopolistic pricing strategy will definitely differ from that of an oligopolist. Financial background of companies, manpower availability, organizational objectives and the rate of competition also affect strategy. Admittedly, no strategy has been discovered to be the most effective but nothing can still weaken the fact that for every given business environment, there are strategic options that appear most appropriate. The ability to discern and apply strategies at every given business situation is what makes a good strategic manager. This is what informs the success of the focal firm under discussion.

### **Strategic marketing**

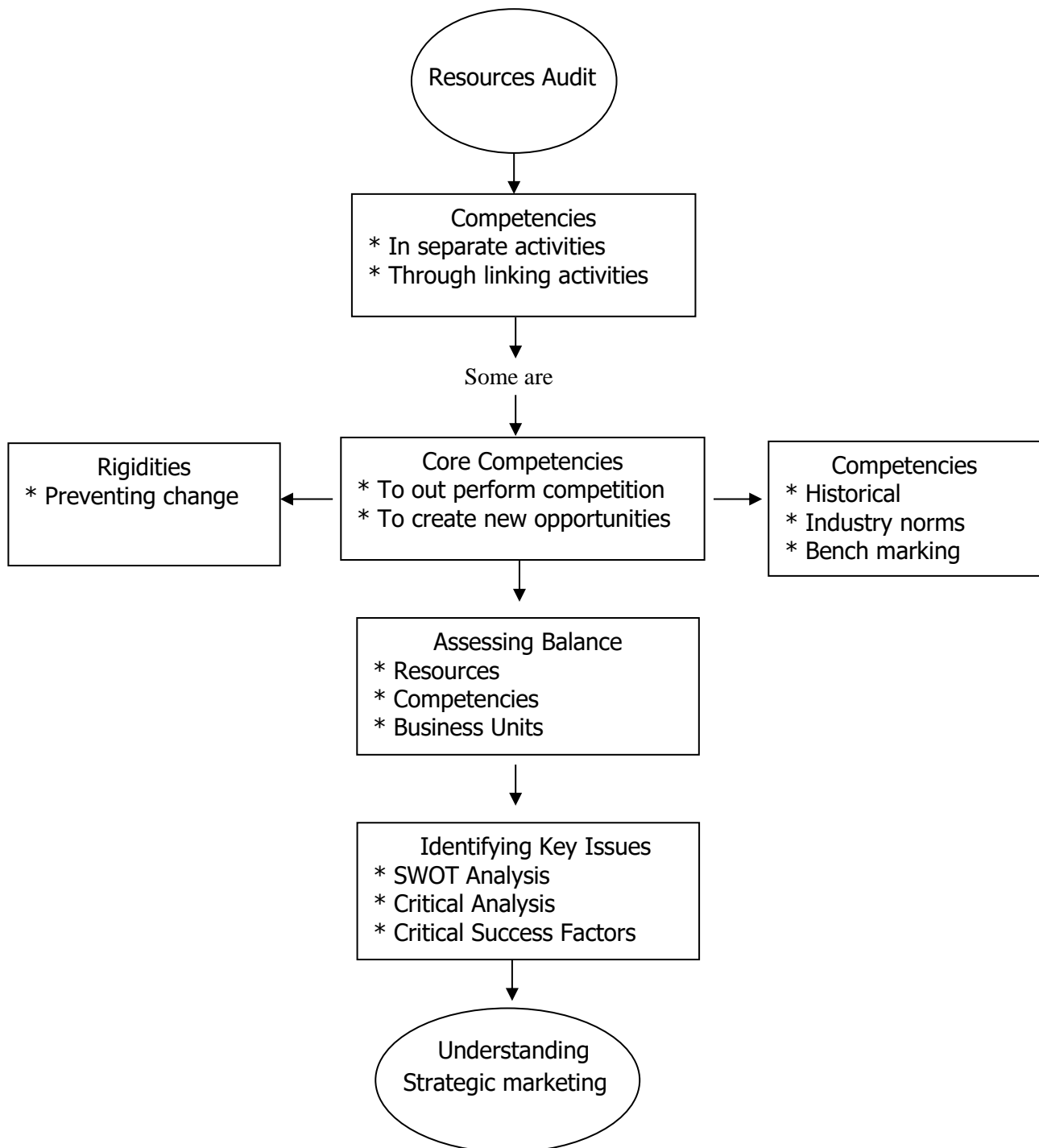
In Nigeria, the challenges of doing business have been herculean. Apart from global challenges in recent times culminating in the crash of stock market, Nigeria banks have come to face the challenges of consolidation, mergers and acquisitions. All these rifts posed greater challenges to entrepreneurial organizations, thereby leading to the collapse of many companies, particularly, in Aba, Abia State. Companies' survival in the face of all these problems depended on strategies employed by each of them (Okeke, 2009). The long held concepts of marketing have been identified as "customer value" "comparative advantage"



and “focus”. This means that organizations must study the market, develop products or services that satisfy customers’ needs and wants, develop the “correct” marketing mix and satisfy its own objectives as well as giving customer satisfaction on a continuing basis. Preoccupation with the tactical workings of the marketing mix led to the neglect of long term product development so, “strategic marketing” was born (Carter, 1984). The focus was shifted from knowing everything about the customer, to knowing the customer in a context which includes the competition, government policy and regulations and the broader economic, social and political macro forces that shape the evolution of markets. In global marketing terms this means forging alliances (relationships) or developing networks, working closely with home government officials and industry competitors to gain access to a target market. Also the marketing objective has changed from one of satisfying organizational objectives to one of “Stakeholder” benefits, including employees, society, government and so on. Profit is still essential, but not an end in itself.

### **Methodology**

In analyzing the strategic marketing capability of an organization, it is necessary to consider the organization at various levels of detail. There are broad issues of capability which are relevant to the organization as a whole. These are largely concerned with the overall balance of resources and mix of activities. At the detailed level there are assessments to be made of the quantity and quality of each key resource, such as buildings, machines and people (Johnson, 1999). He posits that the central issue in understanding the strategic capability of an organization is an assessment of the competence which exists to undertake the various separate activities of the business, such as design, production, marketing, delivery, and customer liaison and support. It is an understanding of the competence in performing these various value activities and managing the linkage between activities which is crucial when assessing strategic capability. Figure 1 below provides a systematic way to move from an audit resources to deeper understanding of strategic capability.



**Fig 1.** Analysing Strategic Capability

**Source:** Johnson Garry (1999:329), Exploring Corporate Strategy, Prentice Hall.

- i. The resource audit identifies the resources available to an organization, from both within and outside, to support its strategies. Some of these resources may be unique

- in the sense that they are difficult to imitate—for example, patented products, a low-cost source of supply or the location of a facility.
- ii. Assessing competence requires an analysis of how resources are being deployed to create competence in separate activities, and the processes through which these activities are linked together. Usually, the key to good or poor performance is found here rather than in the resources per se. Value chain analysis can be used in understanding and describing those activities and linkages.
  - iii. Although an organization will need to reach a threshold level of competence in all the activities which it undertakes, it is only some of these activities which are core competences. These are competences which underpin the organizations ability to outperform competition.
  - iv. Competences are difficult to assess in absolute terms, so some basis of comparison is needed. The two most frequently used comparison are historical (improvement or decline overtime) and industry norms comparison with the performance of similar organizations, often competitors). A third basis of comparison-benchmarking is now in common use and involves comparison of competences with best practice.
  - v. The various analysis concerning resources and competences usually relate to separate strategic business units. An organization's overall strategic capability will also be influenced by the extent to which its resources, competences and strategic business units are balanced as a whole.
  - vi. Resources analysis can often prove difficult or fruitless if attempts are made to list the key issues (such as strengths and weaknesses) before some of these other analysis have been undertaken. This identification of key issues is critical and is best undertaken as a means of summarizing the key strategic insights which have emerged from other analysis.

## **Discussion**

There are several theories of entrepreneurship. In this paper, the Resource Based Theory by E. Penrose in her 1959 work "The Theory of the Growth of the Firm "(New York Wiley) is considered relevant..The theory came into limelight in mid 1980s by J. Barney and K. Conner (Dollinger 2006). The assumption of the R.B.T (Resource Based Theory) is that entrepreneurship is facilitated when there are capabilities and resources which the entrepreneur either possesses or can acquire and deploy in sustainable manner. It is only with appropriate resources and capabilities that can be employed in a sustainable manner over a long term in order for an entrepreneurial firm to achieve sustainable competitive advantage and success.

If through a good understanding of the resource potentials, good vision, intuition and creative act, an entrepreneur chooses a particular industry where resources are valuable, rare, hard to copy (or inimitable) and resources that are non-substitutable, the entrepreneur, will not only

be able to succeed, he will above all, be able to enjoy long term competitive advantage and economic success (Udu et al, 2008).

Without sustainable competitive advantage entrepreneurial successes are ephemeral as competitors quickly obliterate the successful outcome of the initial effort. Sustainable competitive advantage comes when entrepreneurs and entrepreneurial firms possess and utilize resources and capabilities that are:

- i. Valuable – because these resources occurring within the environment as opportunity, effectively and efficiently facilitate the implementation of the strategy.
- ii. Rare – because the resources are not enough to go round among competitors or those wishing to enter into competition.
- iii. Hard to copy-because those who are competitors as well as those wishing to compete, cannot duplicate the resource.
- iv. Non-substitutable – because no other resource can be used successfully as alternative.

Resources that are useful in entrepreneurial context include. Physical, reputational, organizational, financial, intellectual, human and technological resources.

Equipped with the above resources in appropriate levels, an entrepreneur as well as an entrepreneurial organization will achieve success and enjoy sustainable competitive advantage in chosen areas of effort (Udu, et al, 2008).

An entrepreneur invests where there is business opportunity. Therefore, survival in the business is dependent on the ability to see beyond his peers. He is driven by the desire to reap in the line of investment. Above all, success in creating something of value-product/service depends on the competence adopted in applying manpower, skills / technical know-how, creativity and innovativeness and resources. Toptree Oil Mills Nigeria Limited has successfully employed these to their advantage.

### **A Suggested Model for Entrepreneurial Success**

This paper, in trying to identify strategic marketing options available to successful entrepreneurial firms, reviewed several literature and theories. The following suggested model for entrepreneurial success has been deduced based on the descriptive analysis in this paper. In Figure 2 strategic marketing, the key to survival for any entrepreneur is hinged on the two-pronged pillars of core competences and distinctive capabilities.

The core competences of an entrepreneur that desires success would include such features as unique management style, innovation and technological style, network of relationship with suppliers and buyers, The maintenance of market lead with vast product range, etc.

On the other hand, distinctive capabilities of an entrepreneur would hinge on corporate architecture, reputation, innovation and strategic assets. In between the two is an overlap of corporate social responsibility

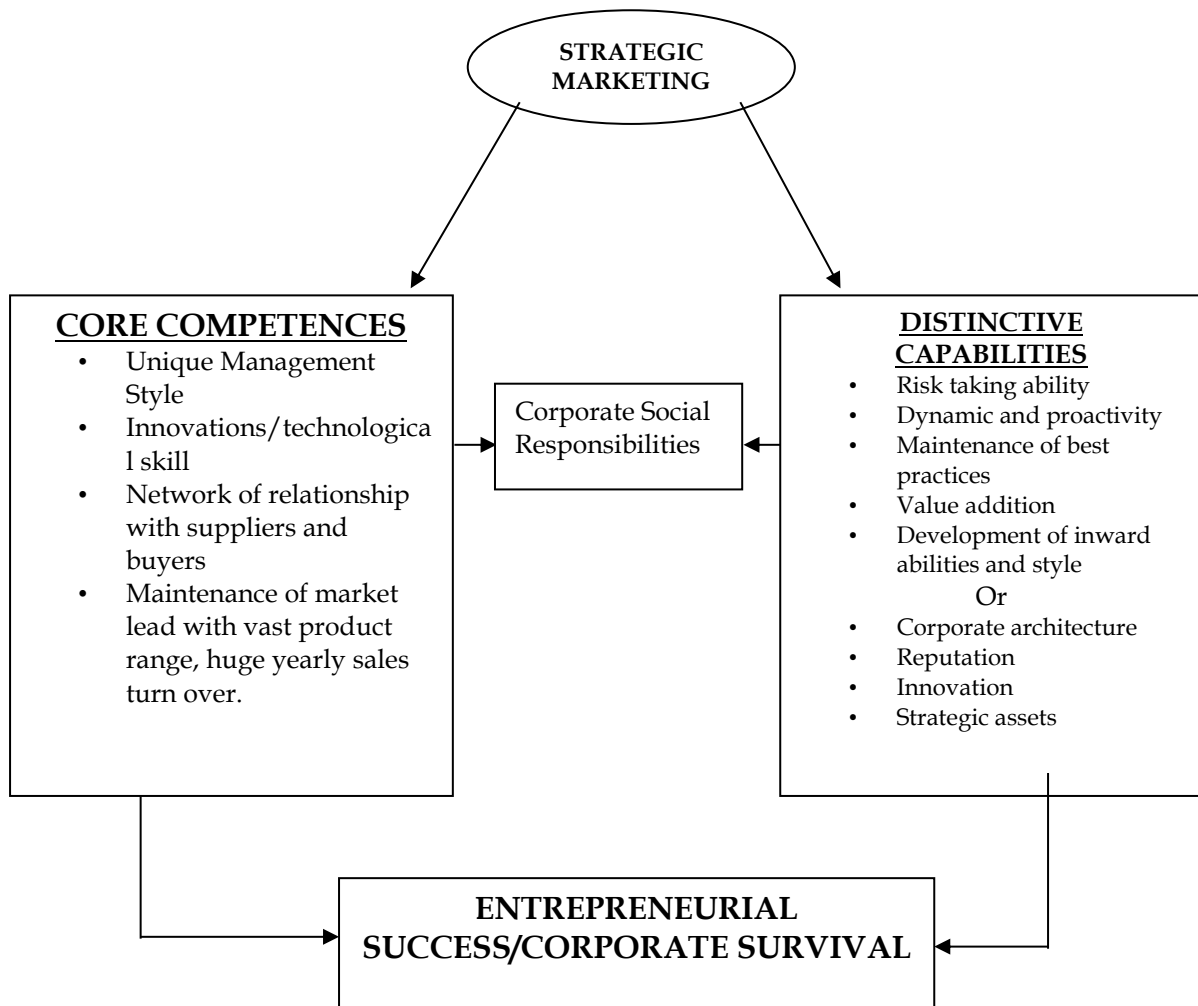


Fig. 2. A Suggested Model for Entrepreneurial Success

Source: Research Data.

### **Conclusions**

Strategic Marketing has been seen as a vital instrument for firms desiring to make progress in turbulent business environment. It helps an organization to understand its business in terms of target market offering, products development and better opportunities for environmental survival in terms of uncertainty. Hence, it is an integrated plan indicating technological innovations and stretching of its competences that an organization accomplishes its marketing objectives and thus remains in the economic and business environment in the long run.

### **Recommendations**

The strategic marketing activities of Toptree Oil Mills Nigeria Limited, Aba – Abia State has been unveiled in this synopsis of academic exercise with the following recommendations:

1. Business organizations must strive always to formulate long term goals.
2. Integrated plan and innovation activities are necessary ingredients for an organization that must remain in business in a turbulent economic environment.
3. Entrepreneurs must strive to develop a reputation for quality goods/services.
4. As organizations stretch their core competence to outwit each other in competitive environment, good corporate social responsibility is very essential.
5. The work is recommended for extension in other similar companies/organizations, (including service organizations) in other parts of Nigeria.

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## ENTREPRENEURIAL EDUCATION AND VENTURE CREATION: AN EMERGING ECONOMY PERSPECTIVE

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### Abstract

The increasing rate of unemployment in the country, specifically graduate unemployment has been a significant source of concern to government and individuals. Despite effort to shift attention away from the dependence on white-collar jobs, and engage in self-owned ventures, the limited number of MSMEs operated by graduates stimulates concerns that necessitated this study. Specifically, the study assessed entrepreneurial education influence on graduate venture creation in Nigeria. The study covered six states, one in each geopolitical zone. The study adopted a survey design. The study population was 4839 serving Corp members, and Taro Yamane formula was used in determining the study sample of 369, which was selected using convenience and purposive sampling technique. Construct and Internal consistency measure was used for the validity and reliability of the study instrument. Multiple regression was used for data analysis. The study concludes that entrepreneurship education has immense value to graduate venture creation by graduates in Nigeria. The recommends among others that there is a need for a regular review of the curriculum content on entrepreneurship education in the country in line with changing global events and activities, given its significance in driving increased venture creation among graduates in the country.

**Keywords:** *Entrepreneurial education, Venture Creation, Graduates, Business Start-up*

### Introduction

Globally, there is a drive towards a knowledge-based economy that is anchored on the need for self-sustenance and improved productivity (Azuka & Azuka, 2013). The drive is borne out of the need to stem the rising tide of graduate unemployment, as it is worrisome that graduates after several years of graduation are not able to secure a means of gainful employment to cater for their immediate and personal needs. This has however, not been a

regional problem as it is global. This, explains why several developed nations have taken actions to ensure that education is directed towards acquisition of skills that will allow for graduates to integrate fully into the labour market after graduation (Oppong & Sachs, 2015, Oluyomi & Adedeji, 2012).

This is because entrepreneurship education is focus towards gaining knowledge, identifying opportunities that abound in an individual's internal and external environment, generating a variety of ideas and the ability to develop the intensity to take necessary actions to start-up a venture (Prodromou, 2010). Similarly, Tende (2015) stated that entrepreneurship education is a process-driven sequential effort aimed at stimulating innate capacity in individuals to identify opportunities, utilise them and project them into marketable action to satisfy needs and meet expectations. Kyro (2003) opined that entrepreneurship education is individual-specific, that is, education that takes into cognisance the individual's interest, values and capacity.

Consequently, Arasti, Falavarjani, and Imanipour, (2012), Rengiah (2013), and Olakundu (2017) operationalised entrepreneurship education using variables such as curriculum content, teaching method, and university support. It is based on the belief that the curriculum content of the entrepreneurship education programmes is as relevant as the programme itself as there must be a content that links with modern reality and provide the student's opportunities to identify their abilities and apply same for their success (Anene & Imam, 2016). In addition, the teaching method is as vital as the programme itself and the need for tutors that provide practical training skills will help students learn fast and with higher interest (Olakundu, 2017). The stay off the fence attitude of university system provides the students with less to do as there should be a support system that allows the students access to update information on their skills and attend programmes that help reshape their knowledge and reduce graduate unemployment in the country (Olakundu, 2017).

Bassey and Atan (2012) stated that graduate venture creation is a situation in which institutions graduates can start-up ventures for self-sustenance. Graduate venture creation is viewed as the ability to start-up ventures in the absence of a paid form of employment. The rising incidence of unemployment among graduates from higher institutions have made this call for entrepreneurial engagement necessary (Tende, 2017). There is still an observed over-reliance on government for jobs. The number of graduates engaged in micro and small start-up ventures still accounts for less than 5% of operational micro and small ventures in the country (SMEDAN, 2013), thus making one wonder whether the education curriculum, teaching method and university support have had significant influence on the graduates.

Finally, this study seeks to correct a commonly observed research abnormally, where entrepreneurship education and graduate unemployment is assessed with undergraduate

students and not graduates. There is no empirical logic behind this common action, as undergraduates cannot provide the requisite answers needed since they are not graduates yet and will not be able to ascertain the relative benefit of the programme until they graduate, thereby not providing a true reflection of the entrepreneurship education programme success in the country so far.

### **Objectives of the Study**

The broad objective of this study is to ascertain the effect of entrepreneurship education on graduate unemployment in Nasarawa State. However, the specific objectives of this study are:

- i. To ascertain the extent curriculum content has influenced graduate business start-up;
- ii. To determine the extent teaching method has influenced graduate business start-up;
- iii. To analyse the extent university support has influenced graduate business start-up.

### **Literature Review**

#### **Theoretical Foundation**

##### **Human Capital Entrepreneurship Theory**

Becker (1975) propounded the Human capital entrepreneurship theory. The theory has specifically been used due to its ability to explaining and investigating of the study of entrepreneur's development and advancement when contrasted with personality trait theory since human capital can be developed and it is dynamic, though personal trait remains constant. This is on the grounds that at each phase of the entrepreneurial procedure, the entrepreneur is gathering skills and expertise, which bolsters once more into his or her underlying enrichment of human capital.

Ucbasaran, Westhead, and Wright (2006) grouped human capital into two particular distinct poles, which are entrepreneurship-specific human capital and venture-specific human capital. They contended that entrepreneurship-specific human capital had been most researched in entrepreneurship, while venture-specific human capital is identified with corporate organisation research.

They showed that entrepreneurship-specific human capital has three noteworthy segments, which are entrepreneurial capacity (capacity to perceive business openings and to take advantage of them); parental foundation (entrepreneurs at initial stages of their growth watch their folks acting innovatively), and to comprehend the idea of life as an entrepreneur (attitude development towards risk, new business start-up and perceptions on finance and management). The venture-specific human capital implies an entrepreneur's information of the venture, knowing their customers and relating with them providers, suppliers and other business related services and product.

Hence, some knowledge and abilities learned by an entrepreneur might be hard to group, because they could fall into more than one of the two classes (i.e. entrepreneurship-specific human capital, and venture-specific human capital). Henceforth, this study will be limited to utilise entrepreneurship-specific human capital. In the application of the entrepreneurship-specific human capital theory to this study, it is on the belief that curriculum content that is appropriate will provide students with the right entrepreneurial knowledge to help graduate business start-up and thus reduce unemployment. The theory provides support that curriculum that is specific towards the capacity to perceive business openings and to take advantage of them will promote venture creation.

### **Concept of Entrepreneurship Education**

The growing interest of economies and survival of organisations has spurred great interest in entrepreneurship since the 1950s. Hence, it has turned into an essential area of business education (Solomon & Fernald, 1991). There has, however, been an absence of general concurrence on the meaning of entrepreneurship education, thus given rise to varying perspectives shared on the concept; however, it has thus attracted research from diverse distinct authors.

Doan and Sung (2018) defined entrepreneurship education as teaching individuals to begin new organisations effectively, ensure it makes a profit, and accordingly contribute to economic development. That is why Bechard and Tolohous (1998) contended that entrepreneurship education is a program or course focused on introducing business learning and business creation strategy, aimed at preparing people to engage in start-up ventures. While Udo-Imeh et al. (2016) observed that entrepreneurship education is the training for innovativeness and advancement, Doan and Sung (2018) comprehended entrepreneurship education as the training that distinguishes how to identify business opportunities, assets distribution, risk administration, and new business creation.

There have been arguments on the contrasts between entrepreneurship education and business training (Hindle, 2017). They guaranteed that entrepreneurship education is not quite the same as business management and administration. Entrepreneurship education centres around the particular activities that business owners perform, underlining advancement and business development. Regular business education stresses general business administration identified with business organisation perspectives (Hindle, 2017). Along these lines, to be particular to new business start-up, enterprise education should centre around the business entry and sustenance in operation (Doan & Sung, 2018), for example, identifying new business openings and maintaining new businesses.

Additionally, entrepreneurship education can be characterised by concentrating on the idea of opportunities identification. That explains the views of Davidsson (2004) that

entrepreneurship education is to show students how opportunities are identified, assessed and sought after by entrepreneurs and with what approaches. This takes into cognisance the content of the teaching, the intended interest group, and abilities to manage entrepreneurial exercises.

From the understandings above, it is normal thus to abridge that entrepreneurship education is aimed at building the consciousness of enterprise (fundamental ideas and information identified with business) and create essential aptitudes and capabilities to manage innovative exercises, which are unique in relation to customary business education (Bechard & Tolohous, 1998; Hindle, 2007). In light of these, entrepreneurship education is characterised as the way toward transmitting innovative learning and aptitudes to students to enable them to identify business opportunities. Consequently, students are relied upon to enhance their states of mind (attractive quality or enthusiasm) toward business enterprise and create information and abilities required to take care of complex issues and dangers or vulnerabilities intrinsic in the innovative procedure (Nwokike, 2016).

In this manner, entrepreneurship education ought to be offered to the enterprise intrigued gathering, as well as the individuals who have not built up their interests in the business. Entrepreneurship education programs/courses ought to underline both on (1) furnishing students with innovative learning and abilities, and (2) building up their entrepreneurial demeanours and goals. Therefore, this study opines that it is essential to recognise what sorts of capability (learning and skills) ought to be offered by entrepreneurship education programmes and also their impact on changing the innovative impression of students. These will offer critical bits of knowledge into planning viable procedures and rules for business education.

### **Dimensions of Entrepreneurship Education**

Arasti et al. (2012) and Olakundu (2017) indicated that entrepreneurship education could be operationalised as curriculum content, teaching method, and university support.

#### **(i) Curriculum Content**

Curriculum content is the educational modules that contain the expected knowledge that is supposed to be acquired from a course or programme (Olakundu, 2017). It is the guide that is required to be followed in the instructing or affecting learning (Anene & Imam, 2016). It is basically what the students should know or are expected to know in some random order over a period. It has been recommended that curriculum contents should focus more on theories and standards of business enterprise in light of the fact that these are valuable to create psychological aptitudes for student's understudies (Ogundele, 2012).

Olakundu (2017) recommended that curriculum content ought to contain majorly management and business knowledge, including market analysis, estimating procedures, financial investigation, leadership principles, HR, and other administrative skills and abilities. Chinweoke et al. (2015) expressed that it should deliver the issues identified with new business start-up, enterprise process and industry conditions. Nonetheless, Oluyomi and Adedeji, (2012) posted it is inappropriate to train entrepreneurs without covering areas related to management and accounting, or financial risk is given a reliable connection between the two fields. In this sense, curriculum content ought to incorporate both business administration and new business start-up learning and abilities. Olakundu (2017) contended that curriculum content ought to incorporate challenges to beginning a new business and converting conceivable ideas to new ventures.

Hence, curriculum content ought to outfit students with various abilities, including leadership aptitudes, human relational abilities, new product improvement, advancement and data correspondence innovation (Okafor, 2005). Then again, Bukola (2011) proposed both the art and science of educational programs content. The authors guaranteed that that curriculum content not just outfits students with multi-practical management skills (the science), yet besides imagination and advancement abilities to manage the vulnerabilities and dangers in the enterprising procedure (the art). In light of the above, entrepreneurial courses ought to stress a progression of business administration learning and aptitudes, (for example, case studies, bookkeeping, new business start-up, new product advancement, financing options), entry of business and gaining competitive advantage.

Moreover, there have been suggestions that curriculum contents should also incorporate the attitudinal readiness of students. Ukoha (2017) accentuated preparing students to be attitudinally free outside standard classroom settings. Oluyomi and Adedeji, (2012) opined that the curriculum content should focus on the preparation of mental qualities required and the entrepreneurship qualities and state of mind, which will enable the students to manage business related risk appropriately. Recently, Chinweoke et al. (2015) accentuated creating motivation (passionate component) of students through entrepreneurship courses, while Olakundu (2017) emphasised the curriculum must contain attention to students feeling on entrepreneurship and developing their emotions towards learning from business failures and risk propensity.

## **(ii) Teaching Method**

Primarily, entrepreneurial or enterprise education is comprised of its distinct and varying styles of teaching (Greene, 2014). At commencement, the style chosen for teaching towards enterprise education was composed of a plan that the business seeks to adopt or strategy for success (Hill, 1988). However, Anyakolu (2006) opined that the writing of business plan as an assumed lecture on entrepreneurial is incapable and lacking to prepare potential

entrepreneurs and visionaries who are relied upon to take certain course of action or take risk, recognize distinctive opportunities, accumulate assets, galvanize and arrange activities towards setting up of business ventures aimed at satisfying consumers need or identified market opportunities.

In the opinion of Honig (2004), there are two teaching styles, which will be instrumental in the advancement of start-up enterprises, and they are simulation and games. Accordingly, Solomon (2007) on his part featured some teaching methods such as the writing of business plan, professional classes, case studies and mentoring or supervisory effort. Further, he distinguished different methodologies, for example, exploratory learning, specialists visit and so forth. In accordance with the above views on teaching methods, the experimental method which includes detailed minded teaching was decreed as the best strategy.

Moreover, Neck and Greene (2011) recommended that entrepreneurship educators and experts should transcend beyond the belief that entrepreneurs are born, not made and thus provide students with the requirement for easy entrepreneurial comprehension and abilities development. There are have been four other business entrepreneurship teaching methods that have been distinguished as a portrayal of the progressions that the field of entrepreneurship has encountered in the development from the centre procedure based entrepreneurship to the focal point of activity-based business entrepreneurship and the effect of these methodologies in educating and learning (Neck & Greene, 2011).

There have also been different approaches to convey business entrepreneurship courses/programs. Van der, Klink, and Boon (2002) opined that students ought to be prepared to settle on choices in the unstructured and unverifiable nature of entrepreneurial conditions and henceforth the enterprise education should centre around the functional preparing on the most proficient method to set up and deal with a new business start-up.

Fayolle and Gailly, (2008) stated that university entrepreneurship teaching method and design should cognisance of the type of graduates they intend to graduate at the end of the day. This consciousness has become necessary owing to the need to streamline entrepreneurship programmes to be specifically driven and articulate the basic rudiments that are supposed to be inherent in the observed skills and interest of their graduates. These should be a primary objective for any institution that wants to achieve the primary goal of entrepreneurship education for their graduates. It should be designed from the immediate environmental, social needs and the industry demands. Hytti and O’Gorman (2004) identified three categories of objectives for teaching method of entrepreneurship education. The authors stated the objectives are to teach to have the knowledge of entrepreneurship, to teach to become entrepreneurial and finally to stimulate the entrepreneur in an individual.

### **(iii) University Support**

In spite of the way that each educational stage in this country plays a vital role to the society, it is at the university stage that there is a more significant relationship with the corporate ventures in the country. Pamela (2017) stated that university support for a business start-up could be seen as a methodology taken by the school administration to give the required coaching and preparing required with regards to the enterprise. It is a deliberate and conscious effort that goes past the classroom and pragmatic way to deal with the arrangement of a favourable situation that supports innovativeness and development in people and the capacity (Poblete & Amorós, 2013).

It is believed that the university develops an imaginative system to the extent that it makes the critical coordination: focuses of brilliance, extraordinariness, consistent and pre-defined structures prepared for making incorporated a motivator from the course of action of learning, through examination commercialisation that anchored genuinely (Dianconu & Dutu, 2015). Likewise, it is clear that innovative mindset is also supported by progressing an entrepreneurial feeling on students and instructors, ensuring that efforts are made in engaging areas prepared to manufacture the number of enterprising endeavours, that will drive their interest and encourage them to want to get engaged. The need to ensuring there is an association between business and industry through the establishment of business incubation centres, mechanical and partnership parks in the university, business discipline taught plan and empowering the enthusiasm for the trading of data and advancement also reinforces the university execution (Rokhman & Ahamed, 2015).

The existing social and financial situations of most economies, most notably the developing economies, it is fundamental for universities to make a basic pledge to the canny regional specialization and encourage widely appealing bodies towards the actualization of promoting a couple of mechanical assemblies of consistent research results from the universities (Rokhman & Ahamed, 2015). This should be because universities are expected to twist up the focal point of data with the piece of completing adjacent specialist's frameworks in perspective of the advantages and needs with genuine impact on headway (Rokhman & Ahamed, 2015).

In the view advanced by Bonaccorsi and Piccaluga (1994) they perceived no under four reasons why present-day divisions would be asked to have a strong relationship with universities. This they indicated is getting quick access to intelligent advancements; extending consistent models; assigning specific enhancement works out, including danger sharing and diminishing of particular costs and settling the absence of benefits, for instance, examine offices and equipment. Universities furthermore have inspirations to look for after the relationship with industry.



### **Graduate Venture Creation**

Studies on venture creation have been a broad research area, and there have been varying methods that have been advanced to starting up business ventures (Tende, 2017, Bukola, 2011; Osakwe, 2011). This probably because business ownership has been as old as man and forms a critical part of every society (Tende, 2017). That is why education for a business start-up is to prepare students to be business owners (Linan, 2004). Unique in relation to the mindfulness education where students might be absolutely new to the business, the focus for this kind of education is tinted towards start-up training course, or program usually are profoundly sort after or a rare opportunity towards satisfying a particular market.

In the opinion of Linan (2004), the determination criteria of the start-up training exceedingly prescribe that the students have arranged certain specific business thoughts of their own. In this way, the start-up courses are to reinforce the ambitious goal of students and help them to start-up business ventures. It is the start-up projects or courses pull in the students who are persuaded to fire up that ensures that they can be self-sustaining upon graduation from the university.

Similarly, business start-up education allows the students to build up the capacity to detect viable opportunities and analyse the opportunities and critically determine the time to make a move (i.e., answering questions such as when or what is the appropriate circumstance to begin a business?). Thus, this depth of education is supposed to teach students to create and fire up personal business ventures. Entrepreneurship education provides students with business start-up schemes that enable the students to make an effort towards starting their own business and managing them in their interest.

### **Relationship between Curriculum content and Graduate Venture creation**

Hadiza and Garba (2015) examined the curriculum content of entrepreneurship education programmes in secondary schools. The sample is 216, and the data was analysed using rank man correlation technique. The study found that content curriculum was adequately sufficient to provide the needed education support need for secondary school students in Nigeria. The study implied that the existing curriculum contents are vital to ensuring that students develop the right entrepreneurship skills required for self-sufficiency. The study was limited to secondary school students, and the study failed to identify whether the curriculum content generally provides a skill acquisition support system required for self-sufficiency.

The study carried out by Hidi, Renninger, and Krapp (1992) assessing curriculum content on student's entrepreneurial intentions for business start-ups. The study used a sample of 345 students, and they used a quantitative approach using multiple regression. The study found that there is a significant exceptional and testing assignment for teachers to take cognisance of every student's ability and interest and the class sizes educators need to work with. The

study found that suitable encouraging curriculum contents that allow for diverse techniques can invigorate student's interests in entrepreneurship and for business creation. However, it is worthy to state that this study failed to highlight the basics of curriculum content and designing a curriculum content on the interest of students may not be possible. This leaves a gap that this study seeks to close. Thus, this study states that:

**Ho<sub>1</sub>: Curriculum content has no significant influence on graduate venture creation  
Relationship between Teaching Method and Venture Creation**

Nwokike, (2016) carried out a study on teaching method role in improving the entrepreneurial competencies. The study adopted a quantitative approach and a study sample of 109 using 15 universities in the southeast, Nigeria. The study adopted the analysis of variance to test the study hypothesis. The findings indicate that practical activities and demonstration method have a significant influence on improving the entrepreneurial competencies of students. The study drew support from the fact that students will also learn when the emphasis is led by the lecturers. A situation where the students see their lecturers engage in profitable ventures could also influence them positively.

Ukoha (2017) examined entrepreneurship education among the three federal colleges in Nigeria. The study adopted a survey research design, and a sample of 30 instructors participated in the study. The study used simple percentages to analyse the responses from the questionnaires. The study revealed that the method of teaching adopted were traditional methods and thus explained the inability of the students to fully engage in entrepreneurial activities after graduation. The study also found that the teachers were less concerned about whether the students have a practical understanding of the concepts and ideas explained. We, therefore, propose that:

**H<sub>02</sub>: Teaching method has no significant influence on graduate business start-up.  
Relationship between University Support and Venture Creation**

There have been different studies carried out to assess university support and graduate business start-up. The study carried out by Saeed, Yousafzai, Yani-De-Soriano and Muffatto (2013) assessed the perceived role of University support in student's entrepreneurial intention formation. The study operationalised university support with concept development and educational support. The study sample comprised 805 University students that partook in the survey. The study used SEM for data analysis. The study findings revealed that university support affects entrepreneurial intention. The study failed to identify the links university support to the actual start-up of a business, as the focus was on perception alone.

Khayri, Yaghoubib and Yazdanpanah (2011) on university education and business start-up provided empirical justification for university support role on business start-up. The study sample was 452 graduates that took part in the study. The study used multiple regression

technique for analysis, and the study found that university education though vital contributes minimally to the ability to engage in entrepreneurial ventures by graduates. The study found that the university prepares the graduates but contributes little in attributes such as innovations, adaptability, prescience, and delegacy, a reaction against feedback and proposals, the attitude of versatility, authority and self-assurance. Thus, we propose that:

**H<sub>03</sub>: University support has no significant influence on venture creation**

**Material and Method**

The study adopted a survey design. The choice of the design was because of the nature of the study problem that required gathering inputs to draw inference on likely solutions. The study population was 4839 serving Corp members in six states, one state in each geopolitical zone. The criteria for state selection was based on the year of creation. The graduates from batch A were selected given the time period of the research, and it was our easier access to graduates. The study adopted Taro Yamane (1967) formula in determining the study sample of 369, which were selected using convenience and purposive sampling technique. Construct and Internal consistency measure was used for the validity and reliability of the study instrument. Multiple regression was used for data analysis with the aid of SPSSv25.

**Measures**

The study relied on self-design instrument to measure entrepreneurship education. The instrument has twenty-one items for the three variables used in the study. The instrument was designed in a likert scale format ranging from strongly agreed to strongly disagreed. Example of some of the instrument questions where 'the university provides us with avenues to start-up ventures in school', the teaching is direct and practical towards our learning and understanding' and the basis of starting and managing a business were covered in during entrepreneurial classes'. The instrument was pilot tested on a sample of 25 undergraduate students. Principal component factor analysis was carried out. The Cronbach alpha coefficient for the three variables curriculum content, teaching method and university support are 0.723, 0.811 and 0.798 respectively. The instruments retrieved were 40 and principal axis factoring with varimax rotation was conducted. The KMO and Bartlett's test of Sphericity were significant (0.722,  $p < 0.005$ ), which is consistent with the recommendation of Tabachnick and Fidell (2007) recommendations. The result established the multidimensional nature of entrepreneurial education. four (4) items loaded on curriculum content, Six (6) items loaded on university support and three (3) items loaded on teaching method. The scale explained variance stood at 61.113%.

The instrument used in measuring venture creation was a self-design instrument and the items were designed from adaption of literature on venture creation and business start-up. The scale had 10 items, and the Cronbach alpha index was 0.89. The KMO and Bartlett's test of Sphericity were significant (0.842,  $p < 0.005$ ), which is consistent with the recommendation

of Tabachnick and Fidell (2007) recommendations. The result established that venture creation was unidimensional and the items with less than .70 was removed reducing the scale to six items.

## Result and Discussions

**Table 1: Model Summary on Entrepreneurial Education and Venture Creation**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.598 <sup>a</sup>	.358	.353	.71388	1.682

a. Predictors: (Constant), University support, Teaching method, Curriculum content

b. Dependent Variable: Venture Creation

**Table 2: ANOVA on Entrepreneurial Education and Venture Creation**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	103.814	3	34.605	67.903	.000 <sup>b</sup>
	Residual	186.012	365	.510		
	Total	289.827	368			

a. Dependent Variable: Venture Creation

b. Predictors: (Constant), University support, Teaching method, Curriculum content

**Table 3: Coefficients on Entrepreneurial Education and Venture Creation**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.100	.211		5.200	.000		
	Curriculum content	.267	.049	.284	5.400	.000	.635	1.576
	Teaching method	.149	.050	.149	2.968	.003	.700	1.429
	University support	.306	.051	.298	5.997	.000	.711	1.407

a. Dependent Variable: Venture Creation

The result above is a multiple regression result on the overall model on entrepreneurship education ability to predict graduate venture creation. Table 2 on model summary indicates the R= .598, R<sup>2</sup>= .358, adjusted R<sup>2</sup>=.353, SD = 7.1388. The multiple correlation coefficient between the predictors and the criterion variable was .598. This means that a 59.8% shared positive relationship exist between entrepreneurship education and venture creation. The predictors accounted for 35.8% of the variance in graduate venture creation. The variance is explained by the model (curriculum content, teaching method and university support

system). This means that the model explains 35.85% of the variance in graduate venture creation in Nigeria. This moderate value indicates that the model is a good predictor of the dependent variable. The adjusted R square shows a better estimate of the true population to be .353. The generalisation of this model to the population was .353.

In table 2, the value of the regression line sum of squares (103.814) is less than the residual value (186.012) indicating the data is sufficient. The significant F-test shows that the relationship (67.903,  $p < 0.05$ ) indicates the overall prediction of independent variable to the dependent variable is statistically significant. This implies that the model is fit and there is a significant relationship exist between the independent variable (entrepreneurship education) and the dependent variable (venture creation).

The regression line  $G_{BST} = 1.100 + .267CC + .149TM + .306USS$  indicates that graduate venture creation improves by 1.1% for every 1% increase or decrease in the independent variables (curriculum content, teaching method and university support system). The standardised coefficient (curriculum content  $\beta = .284$ , teaching method  $\beta = .149$ , and university support system  $\beta = .298$ ). Further, the relative contribution of each independent variable in explaining the dependent variable is illustrated above. The largest beta coefficient is university support system ( $\beta = .398$ ), which means that university support system has the most effect on graduate venture creation; when the variance explained by all other variable in the model are controlled.

The first hypothesis was on curriculum content influence on graduate venture creation. The t-statistics for curriculum content is 5.400 ( $p\text{-value} < 0.05$ ) and beta is .284. Therefore, given this result, there is sufficient evidence to conclude that curriculum content has significant influence on graduate venture creation. The result is consistent with the result of Hadiza and Garba, (2015) and Hidi, Renninger, and Krapp (1992).

The second hypothesis was on teaching method influence on graduate venture creation. The t-statistics for teaching method is 2.968 ( $p\text{-value} < 0.05$ ) and beta is .149. Therefore, given this result, there is sufficient evidence to conclude that teaching method has significant effect on graduate venture creation. This finding agrees with the study of Nwokike (2016) and Ukoha (2017).

The third hypothesis was on university support influence on graduate venture creation. The t-statistics for university support is 5.997 ( $p\text{-value} < 0.05$ ) and beta is .298. Therefore, given this result, there is sufficient evidence to conclude that university support has significant effect on graduate venture creation. The result is in line with the study of Saeed et al. (2013) and Khayri et al. (2017).

### **Conclusion and Recommendations**

The study concludes that entrepreneurship education has immense value to graduate venture creation by graduates in Nigeria. The study concludes that the university role remains the most vital component in the drive for increased entrepreneurial activities of graduates in the country. Based on the findings, this study recommends:

1. There is a need for a regular review of the curriculum content on entrepreneurship education in the country in line with changing global events and activities, given its significance in driving increased venture creation among graduates in the country.
2. The teaching method adopted should be modern approaches and be in line with global best practices on training young adults on venture creation. The teaching method should allow for the students to make their inputs, thereby showing the innovative ability and improving on them.
3. University support to students while in school should be significantly improved, as it should not be about imparting knowledge alone, but should also providing platforms for the students to show their ingenuity and be allowed to make real business start-ups within the school premises with the right support.

### **Implication of the Study**

The study provides societal implication for government and management of universities in the country would direct beneficiary of the study, as it provides an empirical view on the relevance of entrepreneurship education on graduate venture creation in the country.

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## TEMPORAL CHANGE DETECTION OF VEGETATION COVER IN MUBI METROPOLIS AND ENVIRONS, ADAMAWA STATE, NIGERIA

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### **Abstract**

*Vegetation is an important point for sustainable development, environmental conservation and urban planning process of a city. This research analyses the temporal change detection of vegetation covers in Mubi metropolis. Landsat ETM+ (1999 and 2010) and Landsat TM (1988) were the satellite imageries used to classify the changes in vegetation between 1988 and 2010. Global positioning system was used for ground-truthing; IDRISI TAIGA software was used for image classification and area calculation while ARCGIS 10.1 was used for cartographic visualization. The study reveals that a lot of physical changes occurred in the vegetation cover of Mubi town between 1988/2010 and 1999/2010. It is therefore recommended that vegetation studies should be encouraged by the government to forestall further depletion of the environment as a result of anthropogenic activities.*

**Keywords :** *Vegetation, changes, classification, landsat.*

### **Introduction**

Urban growth is a global phenomenon and one of the most important processes affecting both natural and human environments through many ecological and socio-economic processes (Mandelaset *al.*, 2007). As human and natural forces continue to alter the landscape, various public agencies are finding it increasingly important to develop monitoring methods to assess these changes (Levien et al., 1999). Natural vegetation is facing a general decline in the spatial extent and connectivity of wetlands and wildlife habitat owing to fast urbanization. These problems can generally be attributed to increasing human population (Khan, 2000). Urban vegetation can be an important part of sustainable development, environmental conservation and urban planning process of a city (Rahman, 2009). Chigbu et al. (2011) analysed landuse and landcover changes in the Aba urban area between 1991, 2000 and 2005 using medium resolution satellite images (2000Landsat ETM+, and 2005Nigeria Sat-1, of) The results reveal that from 1991, to 2005, water cover increased from 15.1% to 22.1% and to 22.4% due partly to increasing activities within and around the waterways, built-up area increased from 21.7% to

26.8% and to 36.5%. Consequently, vegetation landcover decreased from 63.2% in 1991 to 51.1% in 2000 and in 2005 it further decreased to 41.1%. Oluseyi (2006) performed urban land use change analysis of the metropolitan city of Ibadan within the periods of 1972 and 2003 and discovered that the land use types that are subject to major changes are vegetal covers and sprawl development. Developments in Ibadan are similitude of the building types in the tradition core and the transition zones. It was also obvious that the city was growing at such an alarming rate using up all the green and other forms of soft landscape in the city. Ujoh et al. (2011) analysed urban expansion and vegetational cover loss in and around Abuja with the use of Landsat imageries between 1987 and 2006. The study revealed that as built-up area increased, vegetation cover decreased at rapid rate. Using population figures of the study area for 1987, 2001 and 2006, the Land Consumption Rate (LCR) and Land Absorption Coefficient (LAC) were determined. Increasing population and expansion in the Federal Capital City (FCC) resulted in land degradation including loss of vegetational cover, indiscriminate waste disposal, and contamination of surface water, farmlands/fallow lands and the surrounding secondary forest. Within that period, mangrove forest was reduced by 50 per cent. Other forest covers in the area also changed, threatening food security and climate among others resources.

### The Study Area

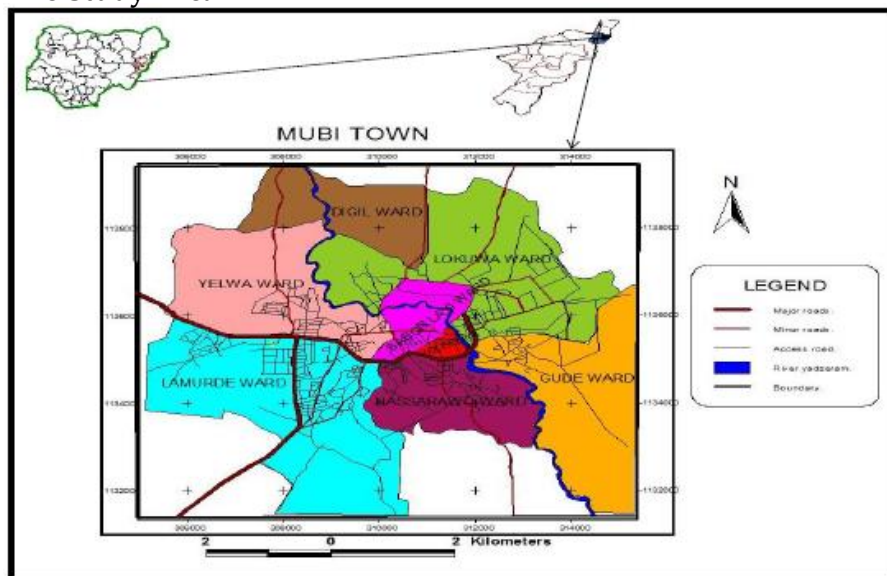


Fig. 1: The study area

Source: GIS LAB., ADSU, MUBI.

### Location and Extent of Mubi Town

According to Adebayo (2004), Mubi metropolis, is a geo-political area comprising of two Local Government Areas; Mubi North and Mubi South. The metropolis is located between latitudes 10° 05' and 10°30'N of the equator and between longitude 13°12' and 13°19'E of the Greenwich

meridian. The two local government areas (L.G.A) occupy of 192,307Km<sup>2</sup> and support a total population 260,009 people (National Population Census, 2006). The area shares a boundary with Maiha L.G.A in the south, Hong L.G.A in the west, Michika L.G.A and Cameroon Republic in the east (Figure 1). The vegetation of Mubi and its environs fall within the Sudan savannah belt of Nigeria. The vegetation zone is referred to as cambretaceous woodland savannah. About 70% of the vegetation is grasses and weeds with few scattered woody plants which make up part of the natural vegetation and the exotic which were brought from other areas into the region. However, the natural vegetation has been altered by human activities such as cutting of trees for fuel, settlement expansion, and farming activities, bush burning, and local lumbering. Despite of the existence of forest reserves, grazing areas and plantation form part of the landcover in various locations especially Mayo-Bani, Betso and Vimtim (Yohanna, 2004). The growth of Mubi town is traced to the agricultural, administrative and commercial functions it performs. By 1902, Mubi was a German base from where the neighbouring tribes (i.e Fali, Gude, Kilba, Higgi, Margi and Njanyi) of the region were subjugated. On 1st April 1960, Mubi was made the native authority headquarters. The same year, July 1960, the town became provincial headquarters of the defunct Sardauna province. In 1967, Mubi was made L.G.A headquarters while in 1996, the town was splinted into Mubi-North and Mubi-South Local Government Areas. Currently, the town is the seat of Mubi Emirate Council and is the headquarters of the Adamawa-North Senatorial District. Mubi is geographically well placed and functions not only as the centre of commerce in the region but also extends its sphere of influence to countries such as Cameroun, Central Africa Republic and Chad. Numerous banks, filling stations and hotels exist in the town to support the commercial activities. Another factor that led to growth of the town is rural-urban migration experienced from the surrounding villages. More over the town has become centre of learning with numerous tertiary and secondary institutions established in the metropolis.

### **Methodology**

The materials that were used for this study involve both primary and secondary data.

#### **Primary Data**

These data were collected through field observation and the use of Global Positioning System (GPS) to collect the coordinates of features in the study area for ground truthing. The data where was integrated into the Geographic Information System (GIS) for error matrix in order to ascertain the accuracy level of the images classified according to classes under study such as bare- surfaces, built-up area, vegetation and rock-out crop and farm land.

#### **Secondary Data**

Thematic Mapper (TM) and Enhanced Thematic Mapper Plus (ETM+) Landsat images of the study area for three epochs; 1988, 1999 and 2010 were obtained from the Global Land Cover

Facility (GLCF) an Earth Science Data Interface. Table 1 shows the characteristics of the images of the study area.

### Hardware and Software

- i. **Hardware:** A HP 530 Laptop, HP colour printer and hand held GPS (Garmin 72) and Global positioning system (GPS) were the main hardware used for this study.
- ii. **Software:** IDRISI Taiga was the GIS software package that was used to manipulate and perform feature identification, recognition and classification. It was also used for calculation of area and statistical analysis. ARCGIS 9.3 was used for map visualization.

**Table 1:** Characteristics of the acquired satellite images.

S/N	Image	Sensor	Resolution	Date of Acquisitions	Source	Band
1	Landsat 7	2010	ETM + 30x30m	07/02/2010	GLCF	7 bands
2	Landsat 7	1999	ETM + 30x30m	10/12/1999	GLCF	7 bands
3	Landsat 7	1988	TM 30x30m	07/11/1987	GLCF	7 bands

### Radiometric Correction

The Landsat scenes used in this research were radio metrically corrected so there is no need to repeat the process that may reduce the quality of the spectral data. Landsat TM 1988 was acquired at 8-bit data whereas the Landsat ETM 2010 was captured as 16-bit data. For later processing Landsat ETM 2010 was synchronized to 8-bit data by rescaling the image. The images were normalized. The spectral distribution of bands of Landsat ETM 2010 was normalised to Landsat TM 1988, which was chosen as a standard scene. The radiometric correction was conducted because it is impossible to obtain radiometric measurements for historical Landsat images. The images of the study area were extracted from Landsat ETM+ 1999 and 2010, and Landsat TM 1988. All the images were sub-mapped using the following The X and Y coordinate: Top left X=303851.47 and Y=1138946.14 Bottom Right X=318971.22 and Y=1130372.38 and the window extracts sub-image automatically from the original image. This was done to all the images of the study year. Colour composite: This was performed for the purpose of enhancing the images, as it allow for simultaneously visualization of information from three separate bands of the images. Training sites were developed in Idrisi Taiga user interface with unique value to each of the classes. (1= built-up area, 2= bare surface, 3= vegetation, 4= Rock outcrop and 5= farmland) after which the images were classified using maximum likelihood classifier for each epoch (1988, 1999 and 2010) as shown in Figures 2a, 2b and 2c respectively. The classify images were then reclassified using the Boolean method. Vegetation was assigned the value 1 while all other classes were assigned the value 0. This leave us with only the vegetation cover of each epoch (1988, 1999 and 2010) as shown in Figures 3a, 3b and 3c.

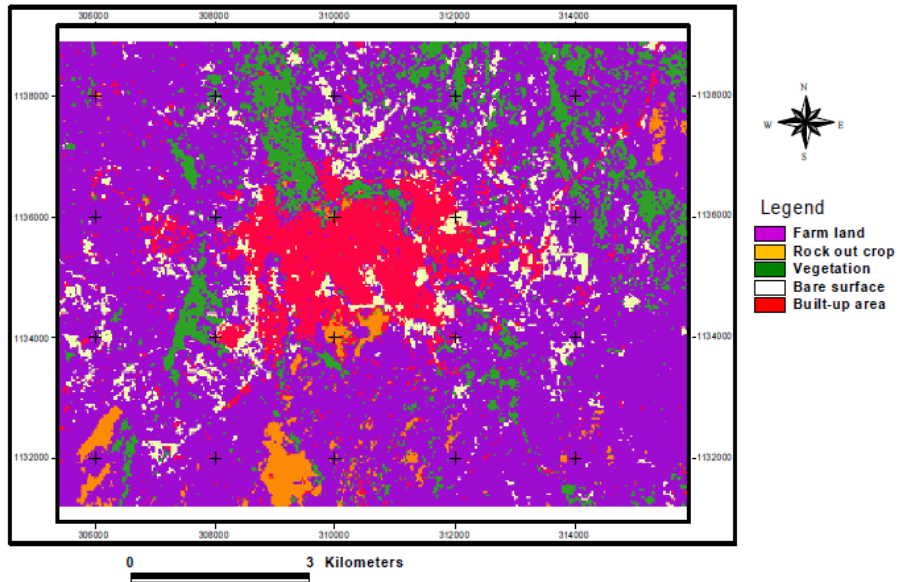


Fig. 2a: Classified Landsat ETM+ of Mubi 1988.

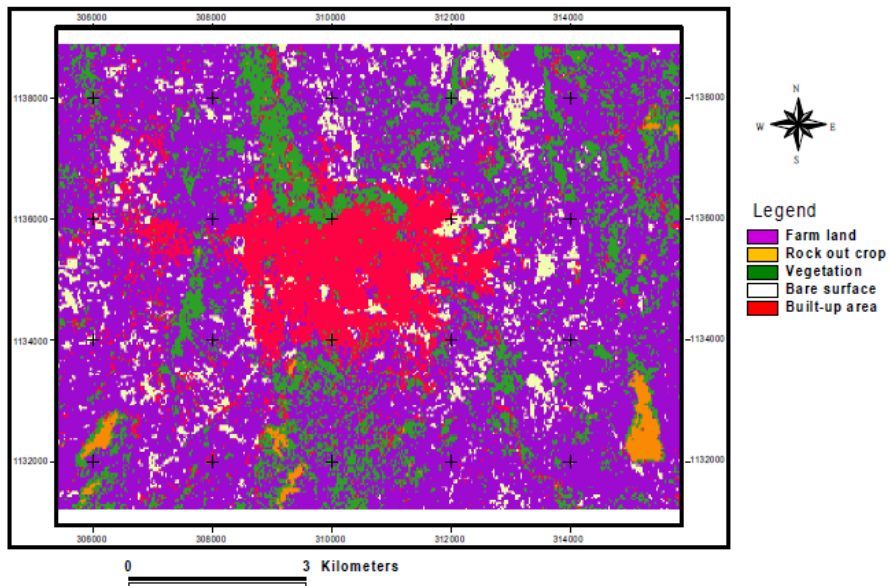


Fig. 2b: Classified Landsat ETM+ of Mubi 1999.

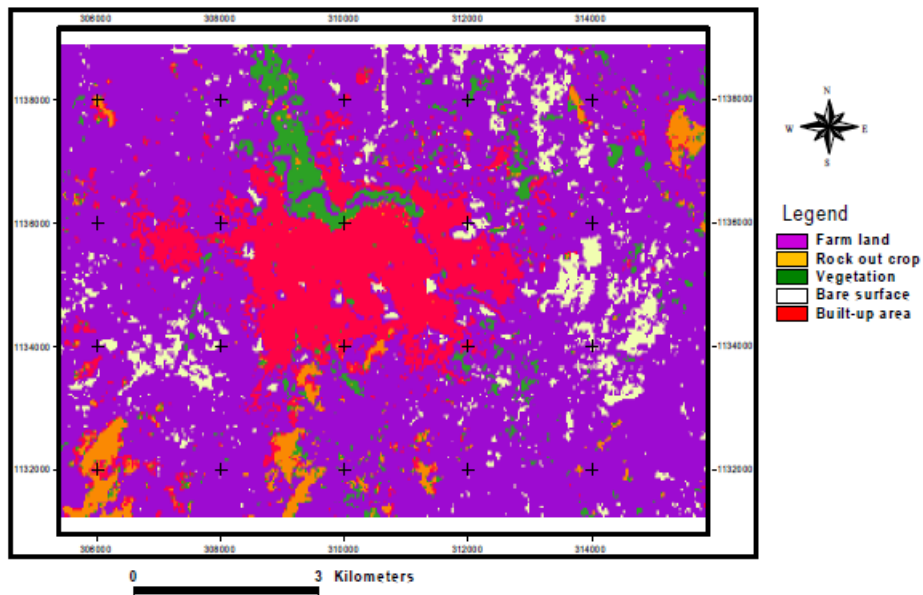


Fig. 2c: Classified Landsat ETM+ of Mubi 2010.

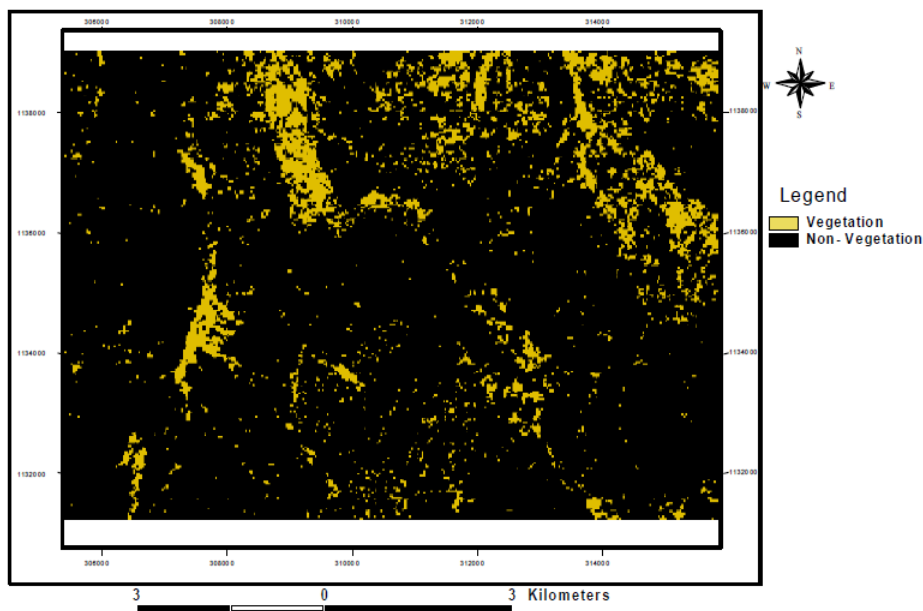


Fig. 3a: Vegetation in 1988.



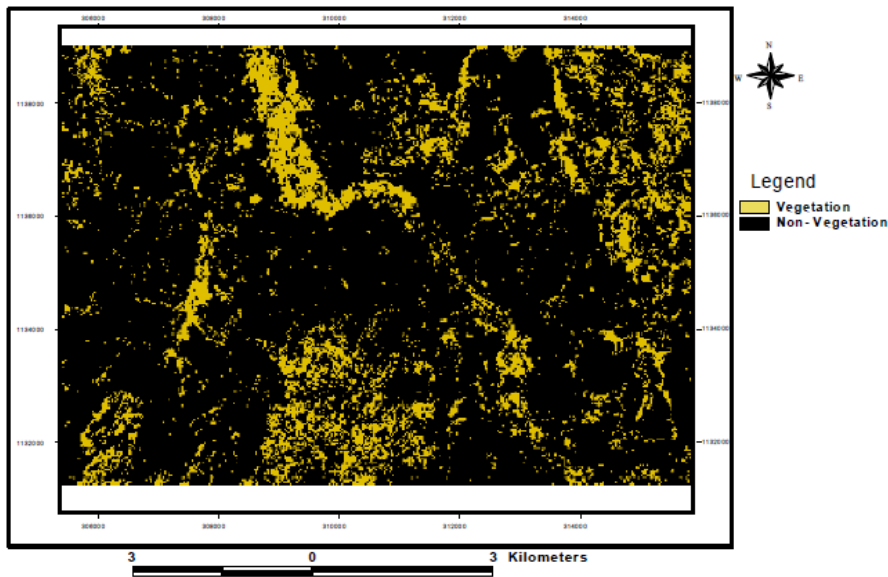


Fig. 3b: Vegetation in 1999

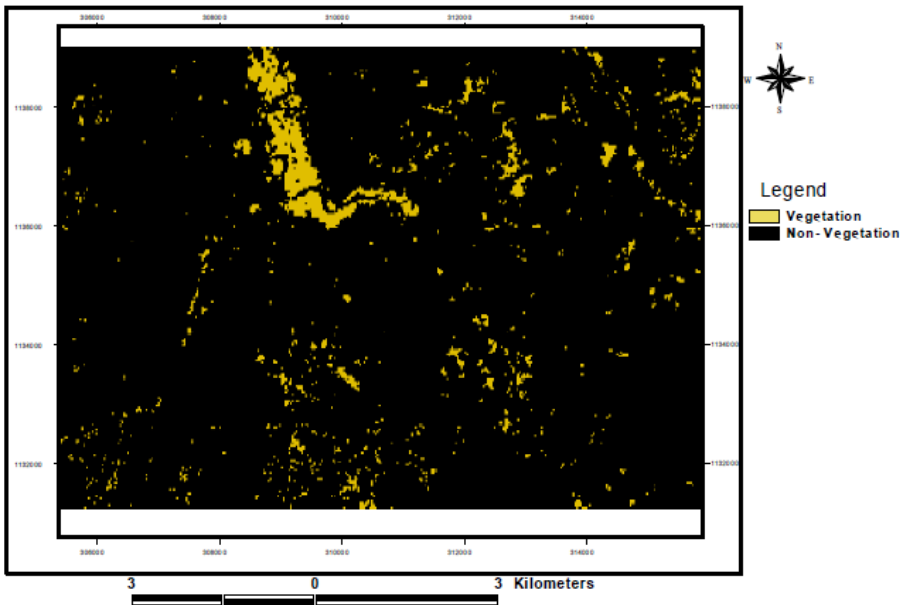


Fig. 3c: Vegetation 2010

## Results and Discussion

### Land use Land Cover Distribution

The classified images classes show the distribution of each land cover type in the study area of 1988, 1999 and 2010 as shown in Figure 2a, 2b and 2c respectively. The land use land cover

distribution for each study year as derived from the maps are presented in Table 2. Table 2 reflects that in 1999 vegetation cover increased to 15.96% as compared to 10.6% more than 1988 due to the fact that knowledge of gardening is becoming prominent as shown in figure 3a and 3b. In 2010, vegetation decreased to 4.55%, the reason for the decrease is mainly based on anthropogenic activities such as farming, and expansion of built-up area as a result of increase in population. The creation of Adamawa State University is also one of the contributing factors for the decrease in vegetation as shown in Figure 3c.

### Conclusion and recommendation

This study has demonstrated the potential of remote sensing in carrying out changes in vegetation. The images of the three epochs (1988, 1999 and 2010) were classified into five classes and reclassified to map vegetation alone. This research shows that decrease in vegetation cover is a result of anthropogenic activities. It is therefore recommended that vegetation studies should be encouraged by the government to forestall further depletion of the environment as a result of anthropogenic activities.

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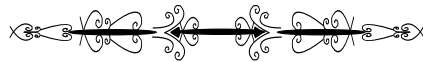
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## ASSESSMENT OF RAINFALL PATTERN AND AGRICULTURAL PRODUCTION IN AFIKPO NORTH LOCAL GOVERNMENT AREA OF EBONYI STATE: EFFECT OF CLIMATE CHANGE AND MITIGATION STRATEGIES

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### Abstract

*The purpose of this research was to assess the pattern and distribution of rainfall in Afikpo North Local Government Area (LGA) of Ebonyi State, Nigeria for the years 2017 - 2018. The LGA constitute of five (5) Autonomous Communities. Research Assistants (RAs) were needed for the field work and two (2) RAs were purposefully selected from each of the five (5) Communities to give ten (10) RAs. A self-designed recording instrument was used in the field work and data were collected and analysed using frequency distribution, means, tables and graphs. The result will provide the guide with which to suggest to farmers on how to probably plan their farming activities in the future to, among others, help minimize losses of farm produce on the farm. Results revealed that there has been deviation "shift" from the usual pattern of rainfall and distribution in the years covered. The result also showed that there was absence of the usual "August break" in the month of August of the years covered and heavy downpours were experienced more between the months of August and October in the same period (2017 - 2018). There was equally absence of the usual "double maxima" in the months of July and September for the periods covered. The recommendations, among others include that farmers should not cultivate their crops with the coming of the first set of rains which now start early in the year but to shift the planting dates following the pattern of rainfall.*

**Keywords:** *Assessment, Rainfall Pattern, Agricultural production, Climate change, Mitigation*

### Introduction

According to West Africa Agricultural Productivity Programme (WAAPP, 2014), agriculture as a sector provides the source of livelihoods for almost two-thirds of the population in the continent. To this regard agriculture must of necessity be given a pride of place. In effort to

achieve the desired level and targets in agriculture, in terms of adequate food production and provision of substantial support for the local industries, the practice of agriculture requires adequate availability of land and supply of vital inputs such as 'improved seeds, fertilizer, agro-chemicals, among others. The farmers, should be assisted by Extension Organizations to have current knowledge of improved sources of information and have access to all inputs needed for effective production. According to Mashroofa and Senevirathne (2014) farmers need information to identify the cost, storage, usage, varieties of newly introduced seeds, pesticides, and weather in order to get maximum yields and best production. There is also the need for a favourable climate as an all important ingredient or input in agriculture. The effect of climate, a major requirement in agricultural production need not be over emphasized. This is in consideration of the crucial roles of its various elements, especially rainfall, a major source of water resource use in agriculture by farming households.

Rainfall, a very essential element of climate has numerous implications for agricultural production (Oga, 2014). This is because its nature (time of commencement in a given period, frequency, amount, duration, intensity and distribution) to a very large extent determines the types of and level of agricultural practices and production. According to Nwajuiba (2013), much of the water for agricultural production comes from rainfall. Where rainfall is well distributed and in adequate amount, growth and productivity of crops like yam, cocoyam, cassava, plantain, corn, rice and tree crops like rubber, kola-nut, oil palm, citrus, among others, is guaranteed.

According to Nwajuiba (2013) the most important element of climate is rainfall, the amount that falls, how it falls e.g steadily over several days or suddenly in torrential downpours, hence its effectiveness i.e. how much of it is available for use by plants. Currently, records have shown that the nature (time of commencement, frequency, amount, duration, intensity, etc) of rainfall has not been encouraging. There has been deviation from the natural pattern of rainfall (Nigeria Meteorological Agency (NIMET), (2016). An encouraging nature of rainfall in terms of commencement at the right time, moderate or adequate in amount, duration and intensity, no doubt, is desired and generally accepted as the "best nature" of rainfall for any desired level of agricultural production. Consequent upon this best nature of rainfall, it is the utmost desire of places substantially involved in agricultural production, of which Afikpo North Local Government Area (LGA) of Ebonyi State is among, to have and appreciate this nature of rainfall. The current unfavourable nature of rainfall widely experience is due to global warming and subsequently climate change (Moore, 2013). This situation does not augur well for agriculture and agricultural productions, and this, no doubt, has multiplier effects. Often, it has been observed and recorded that the rains do not come when expected and when it is eventually experienced, may be fair, moderate or torrential and in the process may not be adequate for agricultural production or may even be very destructive to physical structures as well as agricultural products (Radio Nigeria (RN), 2011). As a result of Global warming and

subsequently climate change, there is rise in sea level and increased flooding (Moore, 2013). This position was corroborated by (UNESCAP, 2011). There is equally, reduction in the area of cultivable land and decreased food supply. According to Danielou (2012) records have shown reduction, relocation or even extinction of some plants and animal species e.g butterflies, polar bear, walrus, caribou, mistletoe, etc. Sequel to the above discouraging scenario of rainfall as a result of Global warming and climate change, there is need to chart a path to assisting in suggesting mitigation strategies against their negative effects and this informed the study.

### **Objectives of the study**

The general objective of this work was to assess rainfall pattern and distribution in Afikpo North Local Government Area (LGA) of Ebonyi State from 2017- 2018.

### **Specific Objectives**

- i. To determine the time of commencement of rainfall in each day of rainfall in the months of the years covered.
- ii. To determine the frequency of rainfall in each day of the months of the years covered
- iii. To determine the duration of rainfall in hours in each day of rainfall in the months of the years covered
- iv. To make recommendations

### **Statement of the Problem**

Over the years, farmers carried out their farming activities with a good background knowledge of the weather conditions of their immediate environment, especially, in relation to the pattern and distribution of rainfall. With this knowledge, they understood their immediate environment and on this premise planned their farming activities effectively with minimal losses of their farm produce. But nowadays, this background knowledge seems to have been eroded as a result of the influence of Global warming and Climate change. This position is supported by (Moore, 2013). This has caused considerable changes in the weather conditions of their immediate environmental, especially, the trend and distribution of rainfall. Consequently, farmers can no longer understand the current weather conditions of their immediate environment and this has affected the planning of their farming activities and has resulted to some huge losses of their farm produce and other resources. This situation is in agreement with (Danielou, 2012). Sequel to this, farmers need assistance in this regard and to help them achieve this, there is need to provide them with current basic information/data on these changes, among which are changes in the pattern and distribution of rainfall and also suggest adaptation strategies. These will provide guidance for the farmers and enable them to effectively plan their farming activities and subsequently minimize the effects of the present vagaries of weather conditions as they concern their farming activities and mitigation efforts.

## **Materials and Methods**

### **The Study Area**

The work was conducted in Afikpo North Local Government Area (LGA) of Ebonyi State of Nigeria from 2017-2018.

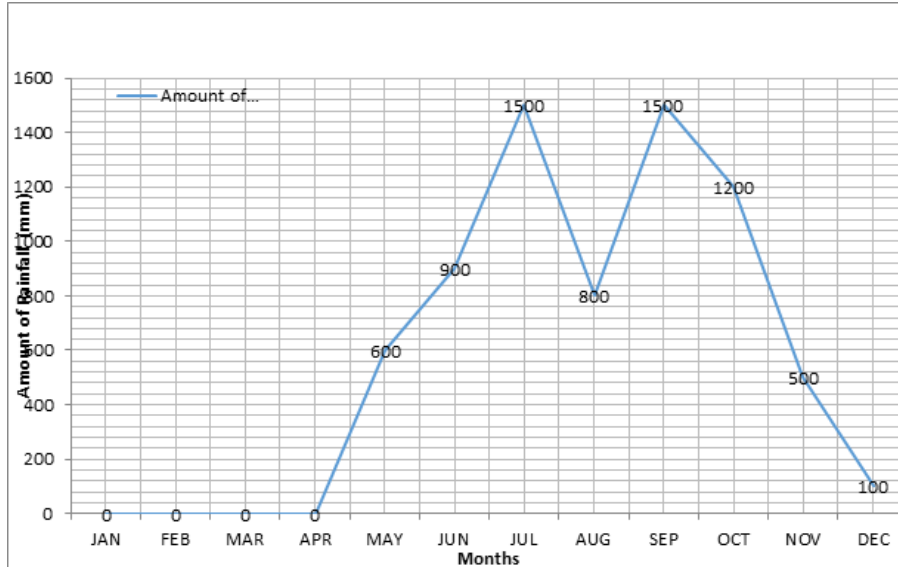
Afikpo North Local Government Area of Ebonyi State is an agrarian LGA with a good number of the populace engaged in one form of agricultural production or the other mainly at subsistence level. The crops cultivated in the LGA include: maize, rice, yam, cassava, cocoyam, potatoes, vegetables, among others. Besides cultivation of crops, animals are reared especially the small ruminants (sheep and goat) and fishing is also practiced by the people. The keeping of poultry is also practiced. The pattern of agricultural production is mainly affected or defined by the influence of the annual weather condition of the LGA based on two distinct seasons: the dry and wet seasons. The dry season starts about the month of November and terminates around the month of March, while the wet season starts in the month of April and ends in the month of October with the average annual rainfall of about 134mm (Ebonyi State Agricultural Development Programme (EBADEP, 2013).

### **Method of Data Collections**

Afikpo North Local Government Area (LGA) is made up of five (5) Autonomous Communities. Two RAs were purposively selected from each of the 5 Autonomous Communities to give a total number of 10 RAs who assisted in recording the parameters considered relevant to the field work.

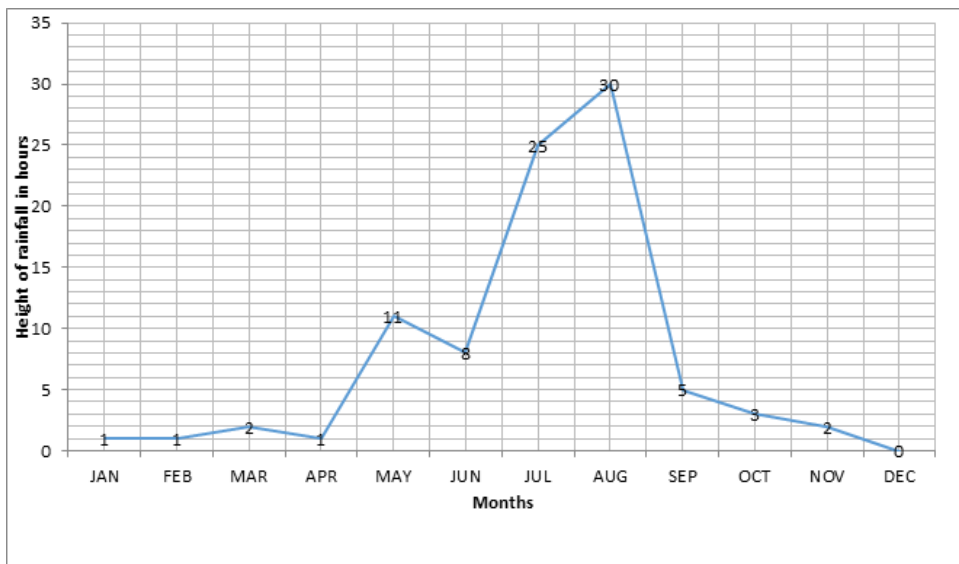
## Results and Discussion

### 1. Time of commencement of Rainfall in the periods covered (2017-2018).



**Figure 1:** Showing the usual pattern and distribution of rainfall before the incidence of global warming and climate change

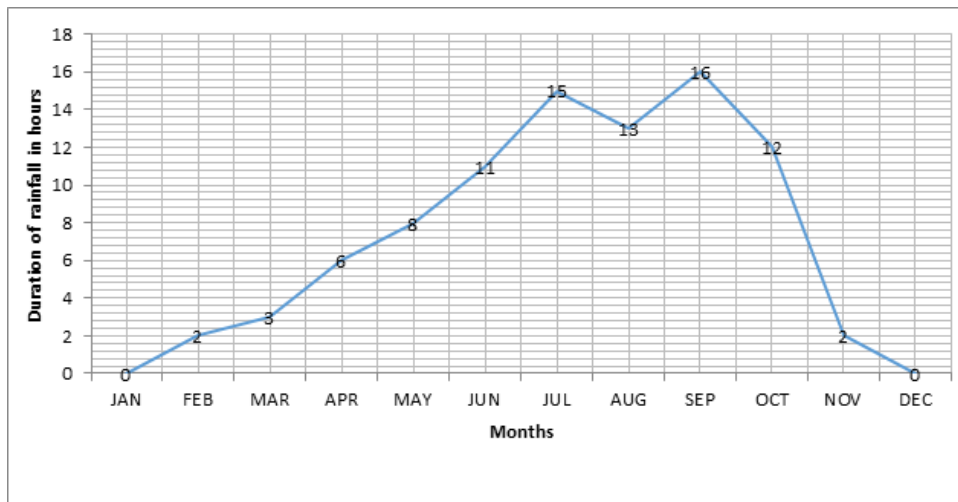
**Source:** Designed with available record and information in (Oga, 2014)



**Fig. 2:** Height of rainfall in the year, 2017

**Source:** Fieldwork, 2017





**Fig. 3:** Height of rainfall in the year, 2018

**Source:** Field work, 2018

Prior to incidence of Global warming and climate change, the usual time of commencement of rainfall in the South East Region and even in the area of study was in the month of April (Oga (2014). See Figure 1. This timing of rainfall encouraged and guided farmers in the planning and execution of their farming activities. With this background information, the results of the field work for the periods covered show that there has been deviations in the time of commencement of rainfall. These days rainfall starts early in the year between the months of January and February contrary to popular opinion. See Figure 1 and compared with Figures 2 and 3.

The field works carried out by Oga and Oga (2011, 2012 and beyond) on the pattern and distribution of rainfall in Afikpo North Local Government Area of Ebonyi State and in Ebonyi State support the fact that there has been convincing “deviations” from the usual pattern of rainfall and distribution in both areas and in other parts of the country. This position is equally supported by (NIMET, 2016).

**Table 1:** Monthly summary of weather elements' conditions in the study area in the year, 2017

Months of the year, 2017	Rainfall		Frequency of rainfall in each month	Duration of rainfall in hours in each month	Frequency of moderate rainfall in each month	Frequency of heavy rainfall in each month
	Yes	No				
1 Jan.	√		4	1	1	3
2 Feb.		√	-	-	-	-
3 Mar.	√		2	2	-	2
4 Apr.	√		2	1	2	-
5 May	√		8	11	6	2
6 Jun.	√		8	8	3	5
7 Jul.	√		14	25	11	3
8 Aug.	√		14	30	9	5
9 Sept.	√		4	5	-	4
10 Oct.	√		3	3	3	-
11 Nov.	√		2	1	2	-
12 Dec.	-					

Source: Field work 2017

**Table 2:** Monthly summary of weather elements' conditions in the study area in the year, 2018

Months of the year, 2018	Rainfall		Frequency of rainfall in each month	Duration of rainfall in hours in each month	Intensity	
	Yes	No			Frequency of moderate rainfall in each month	Frequency of heavy rainfall in each month
1 Jan.		√	-			
2 Feb.	√		4	2	2	2
3 Mar.	√		1	-	1	-
4 Apr.	√		4	6	3	2
5 May	√		8	8	6	3
6 Jun.	√		13	11	10	6
7 Jul.	√		12	15	6	1
8 Aug.	√		6	13	5	1
9 Sept.	√		7	16	2	7
10 Oct.	√		1		-	1
11 Nov.	√		2	2	1	1
12 Dec.						

Sources: Field work 2018

## 2. Frequency of rainfall in the periods covered.

Rainfall was experienced four (4) times in the month of January, 2017 and the same frequency in the month of February, 2018. After this, there were less frequencies of rainfall between the months of February and April for the periods covered. Frequency of rainfall increased fairly

from the month of May to the month of August after which it dropped drastically. See Tables 1 and 2 and Figure 2.

### 3. Duration of rainfall in hours for the periods covered.

There was high increase in hours of rainfall in the month of May 2017 and this was very poor in the month of June 2017. This was the reverse in these same months in the year, 2018 for the periods covered. Generally, there were long hours of rainfall, especially between the months of June and August, except in the month of June 2017. There were “inverse relationships” between frequency and duration of rainfall in hours for the periods covered.

### Effects on Agricultural Production in the LGA

On the coming of the rains early in the years 2017-2018, farmers quickly planted some of their crops only to find out that the rains ceased for about 4-5 weeks. This resulted in the loss of some crops due to absence of rainfall and very high temperatures which scotched the crops, Focus Group Discussions (FGDs, 2017 – 2018). This position is supported by UNESCAP (2011) on the effects of very high temperatures on farm resources. Some farmers also lost their livestock (sheep, goat and poultry birds) due to high level of heat stress as a result of very high temperatures between the months of February and March. These situations resulted in increase in cost of production as farmers purchased more farm inputs to replant and restock when the weather conditions ameliorated.

It is worthy of note here that between the months of August and October of the years covered, some crops were lost due to heavy downpours which caused flooding resulting in the loss of plants and animal materials and other farmers’ resources. This situation is backed up by (Moore, 2013). Generally, there was high cost of production, lost of farm produce and other resources and reduced output contrary to farmers’ expectations. This position is backed up with the opinion of (Danielous, 2012) in relation to decreased food supply consequent on unfavourable weather conditions.

### Mitigation Strategies to Climate Change

According to Recha, Kapukha, Wekesa, Shames, and Heninar, (2014).

Climate change mitigation can be accomplished in the following:

1. **Agro forestry:** Agro forestry is a collective name for land use systems and practices in which woody perennials are deliberately integrated with crops and/or animals on the same land management unit. The integration can be either in a spatial mixture or in a temporal sequence. There are ecological and economic interactions between woody and non-woody components in agro forestry.

Agro forestry is helpful for climate change mitigation in the following ways:

- a. Agro forestry trees store carbon

- ii. The soils of agro forestry systems contain significant quantities of carbon. Generally, the amount of carbon stored in a system's soil remains steady, increasing slowly with time.
2. **Agronomic practices:** Agronomic practices are techniques farmers incorporate into their farm management systems to improve soil quality, enhancing water use efficiency, manage crop residue and improve the environment through better fertilizer management. These steps decrease input costs and also improve the environment by decreasing water use and over-fertilization. Some of the practices here include:
- i. **Cover crops and green manure:** These are crops planted to conserve the soil on bare or fallow farmland. Green manure is a fast growing legume sown in a field several weeks or months before the main crop is planted. Tree legumes used as manure are also called "fertilizer trees. They fix nitrogen in the soil and are more permanent than other types of green manure.
  - i. They help in mitigating climate change in that cover crops and green manure add carbon to the soils) and may also extract plant –available nitrogen unused by the preceding crop, thereby reducing N<sub>2</sub>O emissions.
  - ii. **Relay cropping:** This involves planting temporary crops (cover crops) within the main crop before it is harvested in order to ensure the continuous use of land and the availability of organic materials while reducing vulnerability to soil erosion. The mitigation potential is 0.51-1.45 CO<sub>2</sub>-eq/ha/yr.
  - iii. **Improved crop varieties:** They are crop varieties that have been developed through research and testing to have special qualities, such as fast-maturation rates, high yields, and pest and diseases tolerance.

These are helpful for climate change mitigation in the following ways:

- (a) Using improved varieties can have increased soil carbon or residues that can be managed to store carbon in the soil for a long period of time. Plant improved crop varieties like hybrid maize, grafted mangoes, indigenous vegetables, mosaic resistant cassava, groundnuts and tissue culture bananas.
  - (b) Also, by reducing reliance on fertilizer, using improved varieties can reduce emissions.
- (3) **Residue Management:** Residue management is the sound handling and utilization of plant and crop residues. It combines mulching, composting, integrative livestock and manure management and ideally leaves 30% or more of the soil covered with crop residues after harvest. This practice is helpful for mitigation climate change in that by avoiding burning of residues avoids emissions of aerosols and greenhouse gases (GHGs) generated from fire.

Burning of residues should be limited and carefully managed. A special form of residue management that is currently being promoted especially in the Kenyan context are "trash

lines”, which are made from crop residues, grass and other organic materials collected from the field. They are constructed along the contour line in order to slow down surface runoff and reduce soil erosion and gradually accumulate soil leading to the building of terraces along the contour.

### **Conclusion**

The practice of agriculture is affected by various factors especially climate. The effect of climate is felt through one of its potential elements, rainfall. The rainfall of a place, to a large extent determines the scenario of agricultural production of the place. Currently, the nature of rainfall in relation to agricultural production in the LGA is not encouraging due to the influence of Global warming and Climate change. In order that agriculture continues to play its role as the backbone of a nation’s economy, global warming and subsequently Climate change, there is need for adaptation. Strategies to be employed in this regard include among others adoption of sustainable agriculture and land management practices and water management practices. Farmers to delay cultivation of crops to about 4-5 weeks after the first set of rains which now occur early in the year and farmers to cultivate cover crops etc.

### **Recommendations**

1. Sufficient awareness should be created on the realities of Global warming and climate change both for the farmers and public consumption
2. Farmers should be advised not to plant with the coming of the first rains but to delay planting and probably commence planting after about 4-5 weeks after the first set of rains.
3. Farmers should be advised to cultivate crops that may not require much water during the early rains in the year.
4. Farmers should be advised as a matter of necessity to cultivate edible cover crops as “must crops” during each cropping season.
5. Government as a matter of urgency, should revitalize relevant Agencies such as NIMET and equip them with appropriate technologies in order for them to improve on their services and personnel trained in this regard.
6. There should be establishment of Meteorological stations in some localities where necessary to help provide information on weather conditions to farmers to enable farmers use it and plan their farming activities.

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## SUBSTANCE ABUSE, CONFLICT AND DEVELOPMENT IN NIGERIA

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### Abstract

*This work centers on substance abuse, conflict and development in Nigeria. How illicit substances exacerbate some of the serious global problems facing the world as well as Nigeria is considered in this study. The financial and employment effects generated by the illicit drug trade mask the negative side effects on the economic, social and environmental fronts. It can be shown that the short-term gains are far outweighed by the social and economic ills ushered in by illicit drugs. Those considered below include lower productivity, the spread of the acquired immunodeficiency syndrome (AIDS), and environmental decay. While substance abuse is generally omnipresent throughout society, social conflict theory argues that minorities, the lower class and other marginalized groups are more likely to disproportionately suffer negative consequences as a result of substance abuse. This paper therefore recommends that for us in Nigeria as in any other countries of the world to avert conflict associated with drug abuse, effort should be geared toward curbing the spread of drugs especially illegal drugs in circulation. In addition to this, joint efforts can contribute to curriculum development in communities where drug abuse is a prevailing threat. In countries like Nigeria which is characterized by a high level of drug activity, macroeconomic and, particularly, microeconomic restructuring programmes must focus attention on the role played by the illicit drug industry.*

**Keywords:** Drug Abuse, Conflict and Development

### Introduction

The influence of illicit drugs continues to grow, drawing an ever-larger number of people into a perpetual state of dependence, physiological as well as financial. The drug threat has reached such proportions that traditional ways of viewing it need to be reassessed; new perspectives are necessary to take account of its modern manifestations. The objective of the present paper is to transcend debate about the right solutions and to look more closely at the nature of the problem. Today, the influence of illicit drugs reaches far beyond the heroin



addict and the crime syndicate. The drug problem is deeply rooted in broader socio-economic concerns. One conceptual roadblock which has prevented the drug debate from transcending limited circles of interest in the law enforcement and health sectors is the stigma attached to those involved in drug-related activities. All too often the fact that drug abuse is not an activity engaged in solely by criminal or dysfunctional individuals is ignored. Despite its illegality, the drug trade in some cases provides the basic necessities for economic survival. And that is the point at which the interests of people in the fields of drug control and development intersect. Drug abuse is defined herein as illicit production, trafficking and consumption. The concept of development used in the present paper is based on that advanced by the United Nations Development Programme (UNDP): a process of enlarging people's choices by strengthening their capabilities and maximizing their use of those capabilities. While the focus of the paper is on the development related implications of cocaine, heroin and cannabis abuse, it should not be overlooked that millions of people live under the influence of synthetic drugs like amphetamines and other substances ranging from alcohol and tobacco to industrial products such as inhalants and solvents. Psychotropic substances illicit consumed in developing countries often! Indeed, usually! originate in industrialized countries. This illustrates the need to rethink outdated strategies which have long assumed a one-way passage of drugs from developing to developed countries (UNDP, 1999).

The reach of the illicit drug industry is reflected by the following figures:

- a. The industry as a whole is estimated to have an annual turnover of about \$500 billion a figure which dwarfs the \$62 billion spent on official development assistance in 1992
- b. The area devoted to poppy cultivation in 1992 is estimated to have been 260,000 hectares resulting in 3,700 tonnes of opium! equivalent to 370 tonnes of heroin;<sup>3</sup>
- c. The cultivation of coca in 1992 occupied nearly 220,000 hectares with an output of 340,000 tonnes of coca leaf equivalent to 680 tonnes of cocaine; that same year, coca-growing areas expanded by 20 per cent (UNDP, 1992).

### **Drug Misuse in Nigeria**

Cole (2012) opines that drugs abuse may be defined as the taking of drugs that are not prescribed by any competent authority that is vested without medical or professional advice and direction. Most often, the drug is obtained illegally and such is used in the large quantity which poses danger to the abuser. In the view of Anejo (2009), drug abuse is the harmful use of drugs that can damage the body if mixed and taken for very long periods of time or in large quantity especially for non-medical reasons. Davidson and Weale (2008) further lamented that drugs were supplied to soldiers during the World War II to reduce fatigue and in medical field to treats hyper-active children. During this period also drugs like amphetamines were given to pilots to fly for hours without becoming tired and sleepy. This practice has seemed to have popularized the use of these drugs among others with subsequent wide spread misuse among students, soldiers, Air-force, Navy etc without the doctor's prescription. Esidore (1993)

stated that the issue of drug misuse in Nigeria started with the arrival of cocaine (a potent stimulant and heroine (a Narcotic drug) on our shores. He mentioned that it all started with the arrest of a cocaine peddler in 1982 at the Murtala Mohammed Airport in Lagos and since then thousands of cocaine and heroin traffickers have been arrested and the country has suddenly woken up from the stage of shock to waging war against drug trafficking.

Ngesu and Judah (2008) mentioned that drug misuse came to us from the private medicine and can be classified into non-prescription and prescription drugs. The term drug misuse refers to unreasonable or inappropriate use of drug without medical advice or prescription. These drugs can change person's mood, perception and behaviors; including psycho-active drugs. However, there are laws made mostly against the consumption of nicotine and cannabis and neglecting the consumption of alcohol and tobacco. Thus, drug misuse is any substance that is regularly taken to produce unusual mental reactions rather than a specific medical need.

### **The impact of drug abuse on development**

How illicit drugs exacerbate some of the serious global problems facing the world is considered in this section. The financial and employment effects generated by the illicit drug trade mask the negative side effects on the economic, social and environmental fronts. It can be shown that the short-term gains are far outweighed by the social and economic ills ushered in by illicit drugs. Those considered below include lower productivity, the spread of the acquired immunodeficiency syndrome (AIDS), and environmental decay.

### **Employment and productivity**

Not even the most ardent supporter of *laissez-faire* economics would argue that the negative impact on health of smoking is somehow outweighed by the employment generated in the tobacco and medical industries. The analogy holds insofar as the illicit drug industry is concerned.

The economic gains from the illicit drug industry should be seen against opportunity costs, i.e. what could have been achieved with the resources used by the illicit drug activity. The opportunity costs of the drug trade include: (a) lost investment in legitimate enterprise as farmers and processors funnel their savings into illicit drug cultivation and production; (b) lost investment in human capital as drug-related employment provides a false sense of security to its "workforce"; and (c) future costs to the quality of the workforce as children get caught up in the drug trade. With regard to the "merits" of the trade, the employment generated at each stage of the production chain!from harvesting to processing to retail distribution! creates a ripple effect that justifies labeling the illicit drug trade as an industry in and of itself. One study estimates that the informal sector, of which illicit drugs play a prominent part, equals 50-70 per cent of the official domestic product in Bolivia, 30-40 percent

in Colombia, 30 per cent in Pakistan and 50 per cent in Peru. In Bolivia, it is estimated that 10 per cent of the working population is involved in the illicit coca trade, which generates between \$650 million and \$700 million annually. Between \$150 million and \$200 millions of drug-related revenues stay in the country.<sup>4</sup> In 1990, coca and cocaine exports from Bolivia amounted to an estimated 25 per cent of the value of legal exports. The illicit drug industry can be likened to a self-generating engine of economic growth. Drug traffickers introduce new products into an untapped market, buyers are found, and once users become addicted, a minimum level of demand is virtually guaranteed. Demand becomes inelastic. Sellers reinvest profits to expand operations, and so on. One key input is surplus labour, no shortage of which is expected in the developing world. Indeed, the annual rate of net urban migration is forecasted at about 4.6 per cent by the year 2000.

The International Labour Organization (ILO) estimates that the overall labour force in sub-Saharan Africa will increase in the 1990s by 3.3 per cent a year while employment opportunities there will increase by only 2.4 per cent. At the same time, drug-driven growth requires a shift of limited resources both in financial terms (personal savings) and human terms (work-hours) away from traditional investment options towards necessarily high-risk, short-term ventures. Other productive investments are in effect "crowded out" When authorities eradicate crops in accordance with local legal provisions, the investment made by farmers is nullified. In Bolivia and Peru, the fall in the price of coca leaves since 1992 has confronted many local communities with a related problem: in effect, their invested stocks are rapidly losing value. In response, many have moved from coca to coca-paste production in makeshift processing centres. The negative impact of drug abuse becomes especially clear when the inevitable spillover effect of rising consumption is taken into account. Where trafficking takes root, drug consumption inevitably emerges. This phenomenon has a direct impact on the productivity of an affected country's citizens, including its youth. One ILO study involving Egypt, Mexico, Namibia, Poland and Sri Lanka found that substance abusers have 2-4 times more accidents at work than other employees and are absent 2-3 times more often. The effects of substance abuse on national productivity are significant, as productivity gains are crucial for a country's competitive position in the world marketplace. The dynamics of the problem come even more sharply into focus when it is recognized that some developing countries are outpacing developed countries in rates of drug addiction. Thirty years ago in Pakistan, for example, the number of drug addicts was negligible. Substance abuse was limited mainly to traditional opium-smoking. Ten years ago there were approximately 30,000 heroin addicts. Today there are approximately 1.5 million. Since 1988, the number of heroin abusers in the country has grown by over 8 per cent annually. By the year 2000, the number of heroin abusers is expected to top 2.5 million. In Colombia, a study by the School of Medicine in Bogotá, found that every 24 hours, another 130 people in that country start using drugs. Of the 130, 70 per cent are between the ages of 12 and 17.9 this latter statistic indicates, while drug addiction cuts across a large variety of socio-economic backgrounds, its relationship to age

can be gauged more precisely. The World Bank states that on average users typically fall within the age group of 15-44, although most are in their mid-twenties. In Latin America, the age group is younger, 12-22 years. As with AIDS, drug abuse often attacks people during their most productive years, thereby converting a vibrant source of productivity into a burden on society. Particularly prevalent among younger individuals is the deliberate inhalation of solvents and various commercial aerosols, a highly dangerous activity that has increased rapidly over the past decade. Inhalant abuse, or "glue sniffing", is attractive to children and adolescents for a simple reason: the easy access, low cost and powerful effect of many household products, like aerosols, glues, thinners and even gasoline, endow them with a dual purpose. The abuse of such solvents by street children has become widespread in Latin America, Africa, central and eastern Europe, as well as in industrialized countries like Australia, Canada and the United States of America. In Brazil and Mexico, solvents rank second after cannabis as the preferred substance of abuse among children: 5-10 per cent of children in those countries abuse solvents. It is in this context that the growing phenomenon of street children enters the picture.

Owing to demographic pressures, cities of the developing world are fast becoming warrens of destitute children trapped in a circle of poverty and drug addiction. Thirty years ago, 55 per cent of Brazil's population was rural. Today, 75 per cent of its people live in cities. Three quarters of Brazilian street children are believed to be migrants.<sup>11</sup> India is thought to have the largest number of street children in the world: Bombay, Calcutta and New Delhi each have an estimated 100,000 street children. A growing number are involved in crime, with the juvenile delinquency rate at 3.1 per 1,000.<sup>12</sup> When poverty and adolescent lack of regard for legal norms are combined, the illicit drug industry can be seen to offer a means of economic survival, a source of peer respectability, as well as a convenient, albeit temporary, escape from reality. (United Nations Development Programme, *Human Development Report* 1999)

### **Substance Abuse and the Conflict Theory**

From the perspective of social conflict theory, substance abuse is primarily a problem of structural inequality and class conflict. While substance abuse is generally omnipresent throughout society, social conflict theory argues that minorities, the lower class and other marginalized groups are more likely to disproportionately suffer negative consequences as a result of substance abuse.

While the use of mind-altering substances has been a persistent activity throughout human history, the term substance abuse is generally used to signify an unhealthy, debilitating and antisocial dependence on any chemical substance. Generally, this is most often used to refer to illicit or illegal drugs as well as some legal but regulated substances such as alcohol or prescription medications. Substance abuse is generally regarded as personally and socially detrimental, and is usually considered a punishable offense by many state authorities.

### **Conflict Theory**

Conflict theory refers to a group of social theories, most of which have roots in the works of Karl Marx. Conflict theory posits a model of society whereby different groups pursue their interests independently or against the interests of other groups. These groups compete for resources and power, and over time, some groups come to dominate others. The social order established by these dominant groups then comes to repress minority groups. One way dominant groups do this is through manipulation of the law and the legal process to reinforce the status quo.

### **Drugs Abuse and Socioeconomic Plight**

Even though drug use is common throughout all levels of society, conflict theory points out that marginalized groups in society are more likely to be targeted for substance abuse violations than the dominant class or groups. For instance, it is commonly believed that poor communities and racial minorities suffer from higher numbers of drug use, although some studies have shown that substance abuse is just as prolific in rich, predominantly white communities. Additionally, it is commonly thought that poor and minority youths are more likely to engage in drug dealing as a means of overcoming their economic problems and sense of alienation, thus perpetuating destructive cycles of drug abuse and violence.

### **Drug Laws and Enforcement**

Conflict theory argues that the law and the coercive power of the state (which is generally believed to function in the service of the higher class) is commonly targeted and deployed against marginalized groups as a means of reinforcing the social structure. This is not always intentional, but is oftentimes a consequence of preconceived or received attitudes and bias against marginalized groups. As a result, marginalized groups are more often assumed to suffer from drug abuse and to be more likely to commit illegal acts. Additionally, they are more likely to be seen as undesirables and thus given harsher punishments than their counterparts from the dominant class. This can, in turn, further perpetuate the cycle of substance abuse.

### **Power and Representation**

Conflict theory illustrates how marginalized groups lack the power and representation necessary to better their place in the world, and how the status quo works to preserve and reproduce itself rather than change to accommodate equality. Thus, substance abuse is largely a social-structural problem, exacerbated by pre-existing social circumstances. Critics of conflict theory argue that structural inequality is not an excuse for making bad personal decisions, but they fail to realize that what they consider intolerable behavior in members of marginalized groups they often excuse in members of their own group. Since marginalized groups lack power in society, they also lack the representation and authority necessary to better their situation. Realizing this, they often sink further into the plights associated with

substance abuse. However, through fighting for more representation and recognition in society, some communities manage to overcome their struggle with substance abuse

### **Conflict Situations**

This section contains an examination of three examples of how armed conflict influences drug control. Under certain circumstances, ethnic conflict in particular can take on distinctly drug-related dimensions, as minority groups turn to illicit drug production and trafficking to finance their activities. However, it should also be mentioned that in the past, authoritarian Governments have tried to justify counter-insurgent campaigns with unconvincing often vacuous! claims that they were acting in the name of drug control. With regard to the ethnic dimensions of the illicit drug phenomenon, in some parts of south-east Asia, as elsewhere, autonomy movements against authoritarian Governments have often been propagated by narco-strategic factors; it has been alleged that competition among ethnic groups has in some cases allowed Governments to play one group off against the other, with access to the opium trade serving as the lure for support.

Implications for reconstruction and peace-building efforts are clear. In situations of armed conflict, the illicit drug industry can develop into an integral part of the local economy. When countries are attempting to rebuild, they are at their highest level of vulnerability. This section looks briefly at the experience of three countries torn by armed conflict, Afghanistan, Lebanon and Peru each of which testifies to the fact that conflict is a perfect breeding ground for illicit drug activity. The conflict in Lebanon is widely blamed for the transformation of the Beqa'a valley, an area 75 miles long and 20 miles wide, into a centre of opium poppy and cannabis cultivation. While there has recently been some success in weaning the country's farmers onto alternative crops, the process has been difficult and has suffered setbacks. Between 1975 and 1991, some 500 tonnes of hashish and 3 tonnes of heroin (worth approximately \$1 billion on the world market in 1991 prices) were smuggled from Lebanon into Europe. In Peru, where protracted civil strife has claimed the lives of 25,000 people and caused an estimated \$23 billion in losses, the reconstruction process hinges on the country's ability to overcome drug-related Problems. Recently, a relative degree of calm has returned to the country; as a result, despite continued risks, foreign investors have channelled or announced plans to invest more than \$2 billion in the Peruvian economy.<sup>36</sup> The Lima stock exchange is flourishing: between 1989 and 1993 trade volume is estimated to have expanded by over 200 per cent to more than \$1 billion.<sup>37</sup> While it may appear as though Peru is on the road to reconstruction, illicit drugs continue to represent an integral part of its economy. The country has witnessed an increase of 40 per cent in the area under illicit coca cultivation since 1990.<sup>38</sup> Of a total labour force of 7 million, 500,000 are estimated to be involved in drug-related employment, including 200,000 peasants in coca cultivation. Between 1988 and 1990, coca leaf accounted for 5 per cent of Peruvian agricultural production. The value of cocaine trafficking was the equivalent of 10 per cent of the country's legal exports.

No country demonstrates the dangerous link between armed conflict and illicit drugs better than Afghanistan. The military conflict there has evolved from a guerrilla uprising against external forces into one of internal chaos, resulting in extreme suffering among civilians, displaced populations, one of the eight highest infant mortality rates in the world and, unsurprisingly, a low position in many of the world's development indices. Afghanistan provides more than an example of the havoc wrought by armed conflict. It also demonstrates the extent to which the illicit drug industry can evolve into an economic lifeline for a population. Today, the country is by far the leading producer of opium in south-west Asia. Though statistics vary, annual opium cultivation is estimated to yield up to 2,000 metric tonnes or more. The symbiosis between military conflict, arms trade, drug production, trafficking and addiction has resulted in almost total dependence on drug-related revenues to maintain armed forces. Warring groups continue to struggle for control over areas suitable for poppy cultivation and opium and heroin production, a fact that is fraught with implications for the country's long-term reconstruction. The political and economic development of the country inevitably risks being stifled as long as drugs are seen and utilized as a source of power.

### **Corruption**

Apart from the violence created by cult members, drug abuse in Nigeria also exacerbated already troublesome corruption. This was because drug gangs could only bring their product into the country with the cooperation of law enforcement. To do this, police officers, customs officials and other authorities were heavily bribed. In fact, it is alleged that senior members of the Nigerian police force, military and customs authority were not just accessories to the entry of drugs into Nigeria, but were some of the main traffickers of illegal drugs in the country. Such corruption, which was well known to even the youthful observer, served to further erode the moral fiber of society.

### **Additional Societal Problems**

Drug abuse in Nigeria has also contributed to problems with respect to societal problems. Nigeria is a traditional society where the young are expected to respect their elders. However, drug peddlers, with their power and wealth, have little problem ignoring cultural expectations. Additionally, drug addicts have become beggars in some parts of the country and even steal to support their addiction. There is also the fact that drug abuse inhibits self-control, thus resulting in risky sexual behavior for users. Other societal problem associated with drugs includes:

### **Cultism**

As illegal drugs became easier to find in the 1980s, so also was there a rise in a phenomenon known as cultism. This refers to fraternities on local university campuses that devolved into gangs and began to participate in illegal activities. These groups, commonly called cults,

would fight each other to control drug trafficking within certain parts of the country. This would cause university campuses and even cities to shut down, delaying studies for students. Additionally, these powerful cults would commit gruesome crimes that went unsolved, threaten professors and other authorities, sowing fear and disorder in the communities where they existed.

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### **Implications of economic reform in the developing world**

Whereas the previous chapter focused on several clearly established effects of drug abuse on development, this chapter presents a discussion of potential and future areas of risk. Specifically, the welcome process of economic reform in the developing world will leave many economies vulnerable to an increase in drug-related activity. This vulnerability is fed by profound financial and economic needs and can be explained by a simple premise: drugs can bring in money, and a lot of it. In April 1993, the directors of the International Monetary Fund observed that the strong performance of many developing countries! reflected in markedly higher savings rates, greater investment in physical as well as human capital, higher efficiency of investment and stronger overall growth in productivity was due to "fundamental economic reforms that had led to more stable and sustainable economic conditions" In a substantial turnaround from the inward-looking policies of earlier decades, many Governments in the developing world are now liberalizing financial markets, dismantling trade barriers, privatizing State owned industries, lifting restrictions on foreign investment, rectifying budget imbalances and shifting to full currency convertibility. Yesterday's government intervention is being replaced by reliance on market forces. What is taking place in many economies of the developing world is a distancing of official oversight from capital transactions and private sector operations. Yet the well-founded sense of optimism in this unprecedented economic process must be tempered by a note of caution and concern. The control of drug abuse like the control of contagious disease and the promotion of clean air can be defined as a public good, i.e. one person's "consumption" of the good does not diminish its availability to others. In each case, private markets alone will provide too little of the public good; government involvement is needed to increase its supply. Furthermore, drug abuse has large negative externalities consumption by one individual has negative effects on others.



Drunk driving, heroin addiction and illegal economic activity, for example, mean that leaving too much regulatory responsibility to private markets will lead to unwanted consequences detrimental to public welfare. This is another reason for a major government role in the field of drug control.

It is becoming clear that, without private sector regulatory controls to replace those of government, developing countries as well as economies in transition are becoming an ever more prolific source of the precursors and essential chemicals necessary for illicit drug production. Firms attracted by the prospect of easy profits have invested heavily in developing countries to market products which are regulated and restricted in their home countries. In its 1992 report, the International Narcotics Control Board points to the practice of pharmaceutical companies in Bulgaria manufacturing uncontrolled "look-alike" stimulants destined for illicit markets in Africa. No one would dispute that the economic liberalization in the developing world is a positive trend. But the dismantling of economic controls inadvertently weakens the safeguards however ineffective which have served to stem the expansion of drug trafficking activities in the past. Similar cases can be found in the need for official involvement to control toxic waste dumping and arms proliferation. In the case of drug abuse, what is needed to offset the diluting regulatory effect of economic reform is more attention to specific and appropriately conceived drug control measures.

### **Finance**

One significant result of economic reforms in the developing world is an unprecedented pattern of external finance. The new pattern of lending has two features that distinguish it from that which characterized the 1970s and early 1980s. First, a far smaller proportion is represented by commercial bank lending; more now comes from companies and private investors. Secondly, private firms are enjoying a larger share of incoming flows relative to the past. The purchase of State-run enterprises, the acquisition of businesses by private investors, and the shift to full currency convertibility all provide ample scope for financial manipulation by criminal organizations associated with the illicit drug industry. This threat is often generalized under the umbrella term of money laundering.

The Financial Action Task Force, established in 1989 by the heads of State or Government of the Group of Seven major industrialized countries, estimates that approximately \$85 billion is laundered each year in Europe and the United States. The new shift in focus towards emerging markets in Asia and Latin America with the latter already witnessing substantial increases in repatriated flight capital raises concern about the risks facing emerging financial systems. Such risks go well beyond the mere recycling of illicit revenues into legitimate enterprise, an act which amounts to little relative to the total value of private-sector capital flowing into developing countries. With the trend towards privatization, the real danger comes from the ability of drug traffickers not only to launder funds, but also to acquire portions of what

constitutes a second-hand sale of global proportions. With significant volumes of liquidity at their disposal, criminal entrepreneurs have everything to gain by establishing a foothold in emerging economies and financial systems. Methods used include both the direct acquisition of firms and property, as well as portfolio investments in emerging stock markets.

Colombia provides a telling example. Conservative estimates put the annual income of Colombian drug cartels at around \$4 billion. Of that total, it is believed that up to \$1 billion is fed back into the domestic economy each year. Much of it goes towards land purchases! about 30 per cent of all productive land in Colombia is presumed to belong to drug traffickers.<sup>41</sup> In Cali, the construction industry is booming as a result of a proliferation of luxury condominiums, hotels and office buildings. The construction industry there grew by 37 per cent in 1992-1993.

In the Russian Federation, crime syndicates have already infiltrated the country's financial system. It has been reported that with the collapse of the centralized financial system, the banks in the Russian Federation are more than ever before both targets and vehicles for fraud, money-laundering and extortion. Many have been set up by mafia-style organizations to launder ill-gotten gains.<sup>43</sup> In 1993, the Russian central bank established a minimum capital requirement to operate a bank, equivalent to only \$80,000 at the time. The central bank has not yet established legal guidelines on preventing money-laundering. One other reason for the vulnerability of liberalizing economies is the antiquated methods of interbank transfers that organized crime syndicates can exploit. According to the director of the Centre for Strategic and Global Studies of the Russian Federation, more than \$12 billion disappeared from the Russian banking system in 1993 into the pockets of criminal organizations.<sup>44</sup> In one case alone, local mafia channelled \$40 million by manipulating the outdated technology used by banks.<sup>45</sup> It is alleged that organized criminal groups in Moscow have bribed and extorted their way into most major banking and lending institutions to gain access to individual and corporate accounts.

Once established in the legitimate domestic economy, drug traffickers generally have considerable freedom:

- (a) To transport illicit goods under the guise of legal merchandise;
- (b) To create new markets for wholesale or retail distribution;
- (c) To establish or arrange for new sources of precursor chemicals; and
- (d) To launder even more illicit revenues.

### **Trade**

Over the past five years, developing countries have led the world in reducing barriers to trade. And yet, despite significant benefits to the global economy, there are potentially negative side-

effects insofar as higher trading volumes and fewer official constraints can facilitate the cross-border transactions of drug traffickers

### **Foundations for an integrated response Shared interests**

Sustainable development, health and education for all, economic growth, environmental protection, population management, respect for human rights, good governance! These are but a few of the goals shared by both drug control and development organizations. The question of how to ensure a higher level of inter-agency cooperation in fulfilling these common objectives is the subject of this section. In recent years there has been growing attention on substance abuse as detriment to development. Noteworthy in this regard is the World Bank's use of the disability-adjusted life year in its 1993 *World Development Report*, which quantifies the burden of disease including tobacco-smoking and Alcoholism On development. This trend has accelerated with the growing perception that drug abuse is not merely a crime but, on the demand side, an illness requiring treatment and, on the supply side, an industry requiring effective safeguards.

It is not only that there are overlapping interests on the problem side. There are also common solutions used in both the fields of development and drug control. For example, education is a basic "tool" in both fields. UNICEF, in its path-breaking 1993 publication *The Progress of Nations*, reports that the proportion of the developing world's children enrolled in primary school has risen by two thirds in 30 years, from 48 per cent in 1960 to 78 per cent in 1990.<sup>60</sup> Indeed, many of the tools of development and drug control are similar. In addition to the strengthening of educational services, there is income generation, including the provision of rural credits; institutional capacity building; upgrading health care; improving transport infrastructure; enhancing marketing skills; raising awareness on health risks; and mobilizing society for public welfare. The conceptual underpinnings on which these tools must be used are also similar: research and analysis; policy formulation; and institution-building. One factor which has vented a long-overdue rethinking of the relationship between drugs and development is a lingering misperception of the aims of international drug control. There is a sense that achieving drug control objectives means coming down hard not only on criminals, but also on farmers, their families, and those individuals in futile search of psychological escape.

The image of drug control organizations supporting authoritarian regimes in a manner that overlooks individual rights is as common today as it was 20 years ago. In this light, "law enforcement" still reeks of authoritarianism. This perception, while to a degree accurate in some cases, must nevertheless be refined.

First of all, it should be better understood that law enforcement means different things in different circumstances. Of course, it is often the case that legal institutions, including police,

are simply unprepared to address the rapid emergence of drug-related crimes. In such cases, assistance must naturally focus on building and indeed strengthening institutional capabilities. However, where powerful legal authorities ignore human rights in order to satisfy questionable political agendas, assistance should be aimed at better entrenching law enforcement mandates and capabilities in democratic foundations shaped by the collective will of the people. In this light, insofar as drug control has a human rights dimension, international priorities must focus on strengthening the link between democratic legitimacy and the rule of law.

As a better understanding of the linkage between drug abuse and underdevelopment spreads throughout the world, there will inevitably be greater recognition of the fact that drug control's ultimate aim is to help people. Effective drug control means steering children away from a life of crime. It means assisting individuals to reintegrate into civil society. It means making sure that Governments do not benefit from illegal earnings. It means helping peasants to make a better life without having to fear the law. It means assisting countries to recover from the ravages of war. It means preventing people from getting AIDS.

### **Partnership**

The need for a division of labour between development agencies and drug control bodies is evident. International, regional and local drug control organizations often have a limited operational scope and funding base. They have strengths in: (a) analyzing the nature and extent of illicit drug production, trafficking and consumption; (b) raising awareness of the detrimental impact (health, social, economic, political) of drugs and related activities like money-laundering; (c) conceptualizing policy responses in cooperation with Governments; (d) coordinating the drug control investments of Governments and international bodies; and (e) venturing into pilot initiatives of their own. In addition, they can contribute to an array of initiatives in such areas as institution-building, legislative assistance and the strengthening of prevention and rehabilitation capabilities at the country level.

In short, there is untapped potential for a greater operational interplay between Drug control and Development bodies. One promising area is the field of education. For example, joint efforts can contribute to curriculum development in communities where drug abuse is a prevailing threat. There are many other opportunities to realize a more rational division of labour between drug control and development bodies. In the health sector, for example, health-care centres in drug-producing areas must in many cases be better equipped to take on and pre-empt drug-related disease! to say nothing of HIV prevention among intravenous drug users. Employment schemes often need to be shaped to better recognize and account for the hidden work alternatives in the illicit drug industry. In countries characterized by a high level of drug activity, macroeconomic and, particularly, microeconomic restructuring programmes must focus attention on the role played by the illicit drug industry. This entails

broadening the analytical scope thus far used in the field of economic development. Finally, projects aimed at addressing the needs of street children in many countries urgently require added emphasis on drug rehabilitation and prevention. Many other examples could be cited.

In any joint undertaking between drug control and development bodies, it is of course essential that multidisciplinary teamwork and consultation begin at the planning stage of the project cycle. Only in this way can drug control, when deemed appropriate, be included as an integral part of an overall package of development assistance. As one representative example, strengthening the educational system in a drug plagued community should involve a division of labour such as the following: development bodies concentrate on building or improving school facilities, providing books and other necessities for students and ensuring that recurrent costs such as teacher salaries can be covered on a sustainable basis; drug control bodies develop preventive education programmes for young people, fund outreach initiatives to reintegrate drug abusers into the school system and launch awareness-raising campaigns to enlist the support of local communities.

Another useful example of cooperation involves post-war reconstruction. The division of labour, in this case, is one where development bodies focus on issues such as the reactivation of agricultural production, control of disease, reintegration of refugees, rehabilitation of infrastructure and tapping of reliable sources of long-term income. Drug control bodies play their part by assisting the country (a) in providing legal assistance to integrate the country into the international legal framework; (b) in ensuring against the emergence of illicit production; (c) in developing the institutional mechanisms to prevent cross border trafficking; and (d) in preventing a rise in domestic abuse through education and rehabilitation. This latter area is one in which non-governmental organizations are beginning to play an especially integral role.

### **Conclusion**

Not too long ago and in some circles even today the drug debate was characterized by an ill-conceived dichotomy between so-called "producer" and "consumer" countries. For the most part, that dichotomy politically convenient yet practically deficient has been discredited. In retrospect, it can be seen to have hindered progress in the world's fight against illicit drugs.

From that initial stage of the evolution of the drug debate, a sense of collective responsibility has begun to emerge, gradually even painstakingly giving rise to a second stage which continues to this day. The debate has shifted to how to approach the problem: whether it is best to tackle the problem from a legal or a health-related perspective. Even though the debate is no longer dominated by an "us" versus "them" undercurrent, it can be argued that the same adversarial principles are being upheld; the legal advocates see the problem as a criminal issue requiring enhanced law enforcement while the health advocates see it from the consumer's

viewpoint as one requiring medical treatment. In effect, the debate has shifted from the inter-country to the intra-country level. Thus, while the conceptual framework for international drug control has changed for the better, it is still far from complete. The aim of this paper is to advance the evolution of the drug debate one step further. Its basic premise is that there must be a shift away from the still-present bipolar spectrum of debate to one of a multidimensional nature. The drug problem cannot be adequately addressed when seen from an exclusively legal or health perspective. The debate must be expanded to include still other areas of social, economic, and political analysis. Whether to get involved with illicit drugs is the central question which many individuals both potential drug users and drug suppliers must answer. An approach that involves helping people to make such decisions after they have accurate information, adequate shelter and other basic necessities must replace an approach that has long relied on Governments to do the deciding for them. The links with human development are self-evident.

### **Recommendations**

As stated in the body of this work drug and development has a great correlation. Therefore, the need for a division of labour between development agencies and drug control bodies is evident. International, regional and local drug control organizations often have a limited operational scope and funding base. They have strengths in: (a) analyzing the nature and extent of illicit drug production, trafficking and consumption; (b) raising awareness of the detrimental impact (health, social, economic, political) of drugs and related activities like money-laundering; (c) conceptualizing policy responses in cooperation with Governments; (d) coordinating the drug control investments of Governments and international bodies; and (e) venturing into pilot initiatives of their own. In addition, they can contribute to an array of initiatives in such areas as institution-building, legislative assistance and the strengthening of prevention and rehabilitation capabilities at the country level.

In short, there is untapped potential for a greater operational interplay between Drug control and Development bodies. One promising area is the field of education. For example, joint efforts can contribute to curriculum development in communities where drug abuse is a prevailing threat. There are many other opportunities to realize a more rational division of labour between drug control and development bodies. In the health sector, for example, health-care centres in drug-producing areas must in many cases be better equipped to take on and pre-empt drug-related disease! to say nothing of HIV prevention among intravenous drug users. Employment schemes often need to be shaped to better recognize and account for the hidden work alternatives in the illicit drug industry. In countries characterized by a high level of drug activity, macroeconomic and, particularly, microeconomic restructuring programmes must focus attention on the role played by the illicit drug industry. This entails broadening the analytical scope thus far used in the field of economic development. Finally, projects aimed at addressing the needs of street children in many countries urgently require

added emphasis on drug rehabilitation and prevention. In any joint undertaking between drug control and development bodies, it is of course essential that multidisciplinary teamwork and consultation begin at the planning stage of the project cycle. Only in this way can drug control, when deemed appropriate, be included as an integral part of an overall package of development assistance. As one representative example, strengthening the educational system in a drug plagued community should involve a division of labour such as the following: development bodies concentrate on building or improving school facilities, providing books and other necessities for students and ensuring that recurrent costs such as teacher salaries can be covered on a sustainable basis; drug control bodies develop preventive education programmes for young people, fund outreach initiatives to reintegrate drug abusers into the school system and launch awareness-raising campaigns to enlist the support of local communities.

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## TOWARDS EFFECTIVE JUSTICE DELIVERY IN EAST AFRICA: AN OVERVIEW OF THE INSTITUTIONAL AND LEGAL FRAMEWORK FOR ALTERNATIVE DISPUTE RESOLUTION IN THE EAST AFRICAN COMMON LAW JURISDICTIONS.

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### **Abstract**

This paper examines the current trends, successes and challenges facing the Alternative Dispute Resolution (ADR) institutions in East Africa in efficient delivery of justice. Due to the importance of ADR and its ever growing popularity across the world, it is important that the East African Community, being a key regional economic partner is not left behind in entrenching the practice of ADR (arbitration) in settling international commercial disputes. The author analyses focuses on the international arbitration institutions in the East African region with a view to highlighting the state of legal and institutional frameworks for the effective determination of international disputes through arbitration. The discussion highlights major ADR processes and some of the emerging trends with regard to the users of international arbitration in the region. The ultimate goal is to recommend ways of reawakening arbitral institutions for development of arbitration in the East African region and Africa as a whole. Negotiation, Mediation, Arbitration, conciliation.

**Keywords:** *Effective Justice, East Africa, Overview, Institutional And Legal Framework, Alternative Dispute Resolution, Law Jurisdictions.*

### **Background to the Study**

Access to justice is one of the most critical human rights since it also acts as the basis for the enjoyment of other rights and it requires an enabling framework for its realization.<sup>1</sup> The Constitution of all East African countries provides for the right of access to justice and obligates the state to ensure access to justice for all persons. Access to justice by majority of citizenry has been hampered by many unfavorable factors which include inter alia, high filing

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<sup>1</sup>See D.L., Rhode, "Access to Justice," *Fordham Law Review*, Vol. 69, 2001. pp. 1785-1819; See generally M. Sepúlveda Carmona and K. Donald, 'Access to justice for persons living in poverty: a human rights approach,' Ministry for Foreign Affairs, Finland. pp.8-9.

fees, bureaucracy, complex procedures, illiteracy, distance from the courts and lack of legal knowhow.<sup>2</sup> This makes access to justice through litigation a preserve of select few. Through providing for the use of ADR and TDR mechanisms to enhance access to justice, the Constitution of Kenya was responding to the foregoing challenge in order to make the right of access to justice accessible by all.<sup>3</sup> It was in recognition of the fact that TDR and other ADR mechanisms are vital in promoting access to justice among many communities in Kenya. Indeed, a great percentage of disputes in Kenya are resolved at the community level through the use of community elders and other persons mandated to keep peace and order.<sup>4</sup>

### **Major APR Processes in East Africa**

#### **a. Negotiation**

Negotiation is an informal process that involves the parties meeting to identify and discuss the issues at hand so as to arrive at a mutually acceptable solution without the help of a third party. It has been hailed as one of the most fundamental methods of conflict resolution, offering parties maximum control over the process.<sup>5</sup>

Negotiation has been used since time immemorial among African communities and it is still applied widely in Kenya today. It can be used as a powerful empowering tool to assist the Kenyan people to manage their conflicts effectively.<sup>6</sup>

#### **b. Mediation**

Negotiation leads to mediation in the sense that the need for mediation arises after the conflicting parties have attempted negotiation, but have reached a deadlock.<sup>7</sup> Mediation is a voluntary, informal, consensual, strictly confidential and non-binding dispute resolution process in which a neutral third party helps the parties to reach a negotiated solution. It is also defined as a method of conflict management where conflicting parties gather to seek solutions to the conflict, with the assistance of a third party who facilitates discussion and the flow of information, and thus aiding in the processes of reaching an agreement.<sup>8</sup>

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<sup>2</sup>J.B. Ojwang, "The Role of the Judiciary in Promoting Environmental Compliance and Sustainable Development," 1 Kenya Law Review Journal 19 (2007), pp. 19-29 at p. 29.

<sup>3</sup>Article 159(2); Article 48.

<sup>4</sup>K. Muigua, *Resolving Conflicts through Mediation in Kenya*, (Glenwood Publishers, 2012), pp. 21-22; See generally J. Kenyatta, *Facing Mount Kenya, The Tribal Life of the Kikuyu*, Vintage Books Edition, October 1965

<sup>5</sup>Muigua, K., *Resolving Conflicts through Mediation in Kenya*, op. cit., p.11.

<sup>6</sup>Muigua, K., *Resolving Conflicts through Mediation in Kenya*, op. cit., chapter 2; Kenyatta, i., *Facing Mount Kenya: The Tribal life of the Gikuyu*, (Vintage Books, New York, 1965).

<sup>7</sup>Makumi, M., *Conflict in Africa: Theory Processes and Institutions of Management*. Op.cit. P. 15.

<sup>8</sup>Fenn, P., "Introduction to Civil and Commercial Mediation", In *Chartered Institute of Arbitrators, Workbook on Mediation*, (CI Arb, London, 2002), p. 10.

### **c. Traditional Justice Systems**

It is noteworthy that there is an overlap between the forms of ADR mechanisms and traditional justice systems. The Africa communities in general, have engaged in informal negotiation and mediation since time immemorial in the management of conflicts. In addition, informal justice systems which constitute the most accessible forms of dispute resolution utilize localized norms derived from customary law.<sup>9</sup> The traditional justice systems can effectively be used alongside the formal systems in giving people a voice in decision-making.

### **d. Arbitration**

Arbitration is a process subject to statutory controls, whereby formal disputes are determined by a private tribunal of the parties' choosing. A third party neutral is appointed by the parties or an appointing authority to determine the dispute and give a final and binding award.<sup>10</sup> Its advantages are that parties can agree on an arbitrator to determine the matter; the arbitrator has expertise in the area of dispute; any person can represent a party in the dispute; flexibility; cost-effective; confidential; speedy and the result is binding. Proceedings in Court are open to the public, whereas proceedings in commercial arbitration are private, accordingly the parties who wish to preserve their commercial secrets may prefer commercial arbitration.<sup>11</sup>

### **e. Conciliation**

Conciliation is a process in which a third party, called a conciliator, restores damaged relationships between disputing parties by bringing them together, clarifying perceptions and pointing out misperceptions. It has all the advantages and disadvantages of negotiation except that the conciliator can propose solutions making parties lose some control over the process. Conciliation is different from mediation in that the third party takes a more interventionist role in bringing the two parties together. Conciliation works well in labour disputes.<sup>12</sup> A conciliator who is more knowledgeable than the parties can help parties achieve their interests by proposing solutions, based on his technical knowledge that the parties may be lacking in. This may actually make the process cheaper by saving the cost of calling any other experts to guide them. While conciliation is concerned with finding peace and harmony by putting an end to a conflict, reconciliation seeks to re-establish relations. As such, it can be said to be a restorative process which is desirable in building lasting peace and ensuring that competing

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<sup>9</sup>Kamau, W., "Customary Law and Women's Rights in Kenya." p. 1. Available at <http://theequalityeffect.org/wpcontent/uploads/2014/12/CustomaryLawAndWomensRightsInKenya.pdf> [Accessed on 27/02/2015].

<sup>10</sup>R. Stephenson, *Arbitration Practice in Construction Disputes*, (Butterworths, London, 1998), p.123.

<sup>11</sup>Muigua, K., *Settling Disputes Through Arbitration in Kenya*. (Glenwood Publishers Ltd, Nairobi, 2012) 12

<sup>12</sup>International Labour Office, "Collective Dispute Resolution through Conciliation, Mediation and Arbitration: European and ILO Perspectives." High – Level Tripartite Seminar on the Settlement of Labour Disputes through Mediation, Conciliation, Arbitration and Labour Courts. Nicosia, Cyprus October 18th – 19th, 2007; S. 10 of the Labour Relations Act, No. 14 of 2007, Laws of Kenya.

interests are balanced. Conciliation and reconciliation can play a significant role in empowering parties to a dispute by giving them substantial control over the process.

## **Legal and Institutional Framework of ADR in East Africa**

### **Kenya**

The scope of the Kenya's Arbitration Act extends to cover both domestic and international arbitration. This is provided for under section 2 of the Act which provides that except as otherwise provided in a particular case the provisions of this Act shall apply to domestic arbitration and international arbitration. Section 3(2) defines what arbitration is domestic arbitration while section 3(3) stipulates the requisite conditions for an arbitration to qualify as an international one. Arbitration is domestic if the arbitration agreement provides expressly or by implication for arbitration in Kenya: and at the time when proceedings are commenced or the arbitration is entered into; where the arbitration is between individuals, the parties are nationals of Kenya or are habitually resident in Kenya; or where the arbitration is between bodies corporate, the parties are incorporated in Kenya or their central management and control are exercised in Kenya; or where the arbitration is between an individual and a body corporate firstly, the party who is an individual is a national of Kenya or is habitually resident in Kenya; and secondly, the party that is a body corporate is incorporated in Kenya or its central management and control are exercised in Kenya; or the place where a substantial part of the obligations of the commercial relationship is to be performed, or the place with which the subject-matter of the dispute is most closely connected, is Kenya.<sup>13</sup>

Arbitration is international if the parties to an arbitration agreement have, at the time of the conclusion of that agreement, their places of business in different states; or one of the following places is situated outside the state in which the parties have their places of business: firstly, the juridical seat of arbitration is determined by or pursuant to the arbitration agreement; or secondly, any place where a substantial part of the obligations of the commercial relationship is to be performed or the place with which the subject-matter of the dispute is most closely connected; or the parties have expressly agreed that the subject-matter of the arbitration agreement relates to more than one state.<sup>14</sup> The Arbitration Act 1995 generally provides for arbitral proceedings and the enforcement of the arbitral awards by national courts. Section 3(1) of the Act defines arbitration as contemplated in the scope of the Act to mean any arbitration whether or not administered by a permanent arbitral institution. There exist a few arbitral institutions in the country that have been established under specific regimes and are therefore mandated with conducting arbitration under such laws. This is because the Arbitration Act, 1995 does not establish a sole arbitral institution and its

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<sup>13</sup>Sec. 3 (2) of the 1995 Act as amended by the Amending Act.

<sup>14</sup>7 Section 3(3) (Act No. 11 of 2009, s. 2)

provisions therefore apply to institutional and sole arbitrators operating under other Rules. However, other institutions exist under different regimes of law in Kenya.

### **Chartered Institute of Arbitrators-Kenya Branch (CI Arb-K)**

The Chartered Institute of Arbitrators (Kenya Chapter) was established in 1984, as one of the branches of the Chartered Institute of Arbitrators, United Kingdom which was founded in 1915 with headquarters in London. It is registered under the Societies Act.<sup>15</sup> It promotes and facilitates the determination of disputes by arbitration and other forms of Alternative Dispute Resolution (ADR), which includes mediation and adjudication. The Kenya Branch, now with over 700 members, has a wide pool of knowledgeable and experienced Arbitrators and facilitates their appointment.<sup>16</sup> The Institute also runs a secretariat with physical facilities for Arbitration and other forms of ADR. To further support the process of Arbitration and ADR, the Branch has published the Arbitration, Adjudication and Mediation Rules. The arbitrators are governed by the Chartered Institute of Arbitrators Arbitration Rules when conducting the arbitral proceedings.<sup>17</sup>

### **Nairobi Centre for International Arbitration (NCIA)**

The institution was established under the Nairobi Centre for International Arbitration Act as seen earlier in this paper. Its functions are set out in section 5 of the Act as inter alia to: first, promote, facilitate and encourage the conduct of international commercial arbitration in accordance with this Act;<sup>18</sup> second, administer domestic and international arbitrations as well as alternative dispute resolution techniques under its auspices; third, ensure that arbitration is reserved as the dispute resolution process of choice; fourth, develop rules encompassing conciliation and mediation processes. Further functions include: to organize international conferences, seminars and training programs for arbitrators and scholars; to coordinate and facilitate, in collaboration with other lead agencies and non-state actors, the formulation of national policies, laws and plans of action on alternative dispute resolution and facilitate their implementation, enforcement, continuous review, monitoring and evaluation;<sup>19</sup>

There is also an Arbitral Court established under section 21 of the Act which court has exclusive original and appellate jurisdiction to hear matters that are referred to it under the Act. Section 10 of the Act confers the Registrar with the powers to oversee the business of the court including enforcement of decisions of the Court. The Court has a President and two Deputy Presidents and the Registrar. The Court also has fifteen other members all of whom

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<sup>15</sup>8 Cap 108, Laws of Kenya

<sup>16</sup>The Chartered Institute of Arbitrators Kenya Branch Website, available at <http://ciarbkenya.org/> [Accessed on 08/05/2015]

<sup>17</sup>Chartered Institute of Arbitrators (Kenya Branch) Arbitration Rules, December 2012

<sup>18</sup>S.5(a), No. 26 of 2013

<sup>19</sup>19 bid, S. 5(b)

are leading international arbitrators. The Centre has the capacity to handle domestic and international arbitration. It is hoped this potential will be exploited to its maximum in the years to come so as to prominently place Kenya on the global map of international arbitration.<sup>20</sup>

### **Centre for Alternative Dispute Resolution (CADR)**

The Centre for Alternative Dispute Resolution is another registered institution that is aimed at enhancing settlement of disputes through ADR Mechanisms. With the recognition of ADR in Article 159 of the current Constitution of Kenya, 2010, it is hoped that this Centre will enhance the services of ADR mechanisms in dispute settlement in Kenya. Its Membership is drawn from the Chartered Institute of Arbitrators (Kenya branch).<sup>21</sup>

### **Kenya National Chamber of Commerce and Industry (KNCCI)**

The Kenya National Chamber of Commerce and Industry (KNCCI), is a non-profit, autonomous, private sector institution and membership based organization.<sup>22</sup> It was established in 1965 from the amalgamation of the then three existing Chambers of Commerce: the Asian, African and European chambers, to protect and develop the interests of the business community. It works in close collaboration with the Government, stakeholders and business development organizations internationally. It is an affiliate member of the International Chamber of Commerce and Industry (ICC), the G 77 Chamber of Commerce and Industry, Pan African Chamber of Commerce and Industry (PACCI), the Common Market for Eastern and Southern Africa (COMESA), the East African Chamber of Commerce, Industry and Agriculture (EACCIA), and the East African Business Council (EABC), among others. KNCCI works towards promoting, protecting and developing commercial, industrial and investment interests of members in particular and those of the entire business community in general. They aim at influencing development policies, strategies and support measures so as to achieve the best economic climate for these varied interests.<sup>23</sup> It thus follows that the Chamber would be involved in effective mechanisms of handling business and commercial related disputes. The Chamber operates through a Committee form of management, with several Standing Committees, although the operations are essentially executed by the Chamber Secretariat. The Legislation and Local Authorities Committee is charged with inter alia, domestic and international arbitration and International Chambers of Commerce (ICC) matters.<sup>24</sup> The Chamber can therefore play a significant role in promoting institutional arbitration in the region.

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<sup>20</sup>20 S. 22, No. 26 of 2013.

<sup>21</sup>21 CIArb-K members become automatic members of CADR.

<sup>22</sup>Kenya National Chamber of Commerce and Industry website, visit <http://www.kenyachamber.or.ke/> [Accessed on 9/05/2015].

<sup>23</sup>Kenya National Chamber of Commerce and Industry, 'Vision, Mission and Objectives,' available at <http://www.kenyachamber.or.ke/the-chamber/mission-vision> [Accessed on 9/05/2015].

<sup>24</sup>Kenya National Chamber of Commerce and Industry, 'Operations of the Chamber,' available at <http://www.kenyachamber.or.ke/the-chamber/chamber-operations> [Accessed on 9/05/2015]

## **Tanzania**

The Tanzanian Arbitration Act<sup>34</sup> was enacted in 1931 to provide for arbitration of disputes. The Act has general provisions relating to arbitration by consent out of court<sup>35</sup> as well as provisions on court-annexed arbitration.<sup>25</sup> Further, provisions on arbitration are contained in the Arbitration Rules of 1957,<sup>37</sup> made under the Arbitration Act. It has been noted that the arbitration legislation in force (both the Arbitration Act and the Rules) predates the UNCITRAL model law and has never been changed to take into account its provisions. Tanzania is also a contracting state to the Convention on the Settlement of Investment Disputes between States and Nationals of Other States (ICSID) of 1965 since 17 June 1992. It has been argued that the arbitration system in Tanzania lacks active and competent arbitration institutions and practitioners to facilitate arbitration process for the construction disputes. It is noteworthy that there are two main institutions that carry out institutional arbitration and they are discussed herein below.<sup>26</sup>

### **Tanzania Institute of Arbitrators (TIA)**

The Tanzania Institute of Arbitrators (TIA) is a Non-Governmental Organization registered under the Societies Act (cap 337).<sup>27</sup> Together with the National Construction Council, TIA act as facilitators, enabling the parties (in consultation with their arbitrators) to set ad hoc rules on the procedures which will bind them. They also jointly arrange short professional courses and examination for arbitrators and then compile a list of arbitrators available for proceedings.<sup>28</sup>

### **National Construction Council (NCC)**

This is a statutory body created under the National Construction Council Act. The Council is mandated with inter alia; promoting and providing strategic leadership for the growth, development and expansion of the construction industry in Tanzania with emphasis on the development of the local capacity for socio-economic development and competitiveness in the changing global environment; and facilitating efficient resolution of disputes in the construction industry. The arbitration services of this institution are mainly available to persons in the construction industry although it also offers its services to persons outside the industry albeit at a lower scale.<sup>29</sup>

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<sup>25</sup>Tanzania's Civil Procedure Code (the Code) deals with arbitration where it arises in the course of court proceedings (see Schedule 2 of the Code).

<sup>26</sup>'Tanzania', Arbitration in Africa, June 2007. p. 5. Available at <http://www.nortonrosefulbright.com/files/tanzania-25762.pdf> [Accessed on 27/04/2015].

<sup>27</sup>Cap 337, Laws of Tanzania.

<sup>28</sup>'Tanzania', Arbitration in Africa, June 2007. Op cit p. 5

<sup>29</sup>National Construction Council (NCC) Functions, available at <http://www.ncc.or.tz/functions.html> [Accessed on 27/04/2015].

For a vibrant institutional framework on international arbitration in Tanzania, much more needs to be done to project these two institutions into international arena and change the idea that they deal with arbitration on domestic matters only or even the perception that they are industry-specific. These way users of arbitration in Tanzania can confidently approach them for international arbitration services.

### **Uganda**

Uganda's Arbitration and Conciliation Act was enacted to amend the law relating to domestic arbitration, international commercial arbitration and enforcement of foreign arbitral awards, to define the law relating to conciliation of disputes and to make other provision relating to the foregoing.<sup>30</sup> Its provisions on arbitration apply to both domestic arbitration and international arbitration. The national Courts may assist in taking evidence, setting aside arbitral awards and recognition and enforcement of the arbitral awards.<sup>31</sup>

### **Centre for Arbitration and Dispute Resolution (CADRE)**

Uganda's Arbitration and Conciliation Act establishes the Centre for Arbitration and Dispute Resolution (CADRE). This Centre is charged with inter alia: to make appropriate rules, administrative procedure and forms for effective performance of the arbitration, conciliation or Alternative Dispute Resolution process; to establish and enforce a code of ethics for arbitrators, conciliators, neutrals and experts; to qualify and accredit arbitrators, conciliators and experts; to provide administrative services and other technical services in aid of arbitration, conciliation and alternative dispute resolution; to facilitate certification, registration and authentication of arbitration awards and conciliation settlements; to avail skills, training and promote the use of alternative dispute resolution methods for stakeholders; and to do all other acts as are required, necessary or conducive to the proper implementation of the objectives of the Act. This is the main arbitral institution in the country. It is therefore necessary to have more institutions in Uganda as well as improve information dissemination in order to promote international arbitration in the country.

### **Rwanda**

Rwanda has been a party since 1979 to the Washington Convention on the Settlement of Investment Disputes, which provides for protection for investors and direct arbitral recourse against the State. On November 3, 2008, Rwanda became the 143rd country to accede to the Convention on the Recognition and Enforcement of Foreign Arbitral Awards (the New York

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<sup>30</sup>CAP 4, Laws of Uganda, Preamble.

<sup>31</sup>Ibid, ss. 35 &36.



Convention). The Convention entered into force for Rwanda on January 29, 2009. Rwanda Parliament enacted a law in February 2011 establishing Kigali International Arbitration Centre (KIAC) as an independent body which carries out mediation, adjudication and arbitration.<sup>32</sup>

### **Kigali International Arbitration Centre (MAC)**

Kigali International Arbitration Centre (KIAC) was established as an independent body which carries out mediation, adjudication and arbitration. The Centre has a panel of domestic and international arbitrators. Parties to KIAC arbitrations are free to nominate their arbitrators, subject to by the Centre in accordance with the KIAC Rules. However, when KIAC is called upon to appoint an arbitrator, it does so primarily from its panel of arbitrators. It is noteworthy that until the establishment of the Kigali International Arbitration Centre (KIAC), there was no formal mechanism for amicable dispute resolution, more so international commercial arbitration. KIAC holds a potent potential to promote development of international arbitration in the region and Africa as a whole.<sup>33</sup>

### **Burundi**

In 2007, the Burundian Government created a Centre for Arbitration and Mediation to deal with commercial and investment disputes.<sup>34</sup> In 2009, Investment Code of Burundi was enacted with its purpose being to encourage direct investments in Burundi.<sup>35</sup> This Investment Code allows the competence of international arbitration chambers for disputes arising over investments made in Burundi. In 2014, Burundi became the 150<sup>th</sup> state party to the New York Convention 1958. Burundi however made a “commerciality reservation” to the Convention, which means that the Convention will only apply to disputes characterized as commercial under municipal law. The Convention was to come in force in the country on 21 September 2014 thus enabling arbitral awards made in Burundi to be enforceable in all states that are party to the New York Convention, and awards made in other states to be enforceable in Burundi.<sup>36</sup> International commercial arbitration in Burundi is thus supported by the legal framework. The framework casts a ray of hope for arbitration in Burundi and beyond.

### **Challenges**

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<sup>32</sup>Rwanda Accedes to UN Convention on Commercial Arbitration', UN NEWS CENTRE, Nov. 3, 2008, available at <http://www.un.org/apps/news/story.asp?NewsID=28799&Cr=Trade&CrI=Convention> [Accessed on 28/04/2015].

<sup>33</sup>Kigali International Arbitration Center, Annual Report July 2012-June 2013. P.4

<sup>34</sup>Law No.1/08 of 17 March 2005, Code on the Organization and Competence of the Judiciary.

<sup>35</sup>Law No. 1/24 of 10 September 2008 Establishing the Investment Code of Burundi.

<sup>36</sup>Herbert Smith Freehills Dispute Resolution, 'Burundi becomes 150th state party to the New York Convention'. Available at [http://hsfnotes.com/arbitration/2014/09/03/burundi-becomes-150th-state-party-to-the-new-york-convention!](http://hsfnotes.com/arbitration/2014/09/03/burundi-becomes-150th-state-party-to-the-new-york-convention/) [Accessed on 29/04/2015]

A number of challenges affect the effectiveness of the East African regional international arbitral centres and thus affect their popularity amongst the users of their services in the region.

### **Confidentiality Requirements**

The fact that arbitration is a private process makes it enjoy confidentiality, an important aspect in private matters. Unlike litigation where there is official law reporting, arbitral awards or proceedings are never published without the parties' approval. It has been argued that while confidentiality is an important aspect of international commercial arbitration, there should be adoption of a presumption that arbitral awards should be made publicly available, unless both parties object. This argument is based on the justification that the benefits of greater transparency in arbitration brought about by the publication of awards often outweigh concerns for confidentiality.<sup>37</sup>

### **Institutional Capacity**

It has also been observed that there exists a challenge on the capacity of existing institutions to meet the demands for international commercial arbitration matters. Much more needs to be done to enhance their capacity in terms of the number and quality of arbitrators, adequate staff and finances to ensure that they are up to task in facilitation of international arbitration.<sup>38</sup>

### **National Courts' Interference**

It has been noted that even when an African state has become a party to the relevant treaties, there might still be the perception that its courts could not be relied on to apply the text correctly or in good faith, with a further argument that national legal frameworks are not conducive for the constitution of arbitral tribunals and to the conduct of arbitration, permitting the 'local court' to interfere unduly in arbitral proceedings. It has been argued that traditional litigation in a national court can be a costly, time-consuming, cumbersome and inefficient process, which obstructs, rather than facilitates, the resolution of business disputes. Parties to arbitration agreements have used court intervention to delay and frustrate arbitral proceedings whether yet to start or pending. This delays finalization of the matter as well as watering down the perceived advantages of arbitration and ADR in general. This can only be corrected through setting up tribunals or courts with finality in their decisions and operating free of national courts interference.<sup>39</sup>

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<sup>37</sup>C.G. Buys, "The Tensions between Confidentiality and Transparency in International Arbitration," *American Review of International Arbitration*, Vol. 14, No. 121, 2003. Available at SSRN: <http://ssrn.com/abstract=1330243> [Accessed on 27/04/2015]

<sup>38</sup>K. Muigua, 'Making East Africa a Hub for International Commercial Arbitration: A Critical Examination of the State of the Legal and Institutional Framework Governing Arbitration in Kenya', page 14.

<sup>39</sup>See generally, K. Muigua, *Role of the Court under Arbitration Act 1995: Court Intervention Before, Pending and Arbitration in Kenya*, *Kenya Law Review* (2010), Available at <http://www.kenyalaw.org/klr/index.php?id=82476> J.T. McLaughlin, "Arbitration and Developing Countries," *op cit* at p. 212.

### **Way Forward**

There is a need to employ mechanisms that will help awaken arbitral institutions in Africa and demonstrate the Continent to the outside world as a place with international commercial arbitrators with sufficient knowledge and expertise to be appointed to arbitrate international matters.

There is also need for putting up the relevant infrastructure which includes ICT and other physical structures. This should be coupled enhanced training for purposes of capacity building. Training should start at school level as opposed to institutional professional courses as is the case with most countries. A good example is the University of Nairobi School of Law which currently offers international commercial arbitration as a course in its Masters of Law Programme (GPR 625). The students who take this course can apply directly to become members of CIArb-K at Associate level. This not only boosts the number of persons eligible to pursue arbitration at a higher level but also helps in creating awareness in the country and the region, a powerful tool for awakening arbitral institutions and boosting the development and practice of arbitration.

### **Conclusion**

Effective and reliable application of international commercial arbitration has the capacity to encourage investors to carry on business with confidence knowing their disputes will be settled expeditiously. This can enhance users' confidence in arbitral institutions in the African continent and consequently awaken the seemingly dull arbitral institutions and arbitration practice in Africa. There is hope for the future. Arbitral institutions and arbitration practice in Africa have the potential to grow and flourish. The time to awaken and nurture arbitration for a better tomorrow is now.

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## MAPPING OF FLOOD INCIDENCE AND URBAN RESILIENCE IN OSOGBO, OSUN STATE, NIGERIA

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### Abstract

The urban environment has experienced phenomenal growth in recent times which has compounded urban development problems especially flooding. The study assesses flood incidence and urban resilience in Osogbo with a view to reducing the threats of floods on lives and properties. A total of 1,953 buildings were identified using the Google earth satellite image and 10% was selected for the study. The study adopted a multistage sampling technique where in the first stage, study sites were selected purposively within 100m distance buffer on the drainage channels and in the second stage 195 pretested questionnaires were administered systematically on the residents. Advanced Space born Thermal Emission Reflection Radiation (ASTER) Data of the study area was used to create flood vulnerability maps using geospatial techniques. The study generated a flood vulnerability map categorizing the area into highly vulnerable (0-100 m), moderately vulnerable (100-200m), not vulnerable (200-300m) and high grounds 300 m and above. The data collected was analyzed using descriptive statistics. The study generated an ordered weighted values of significance of the causes of flooding to include; method of waste disposal (4.24), building along flood plains (4.18), lack of drainage system (4.18), poor drainage system (3.88) and heavy rainfall (3.67). The result also revealed that a total of 13.7 km of channels were dredged while 3.6 km of streams were channelized which significantly increased the resilience of the city and reduced the level of flooding in these areas. Similarly, the study identified in order of significance the impact of channelization and dredging on the people to include: livelihood (4.56), safety (4.44), health (4.17) and property value (3.81). The study recommended that to build a resilient city; resettlement, environmental awareness, flood retention and control infrastructure, proper waste disposal, channelization and strict implementation of urban development control measures need to be put in place.

**Keywords:** Geospatial Analysis, Flood Incidence, Dredging and Channelization, Resilience and Urban Management.

## **Introduction**

It has been predicted that by the year 2050 over 300 million people will face annual coastline flooding due to climate change and that more than two-thirds of the populations of China, Bangladesh, India, Vietnam, Indonesia and Thailand are at risk (AFP, 2019). Wahab and Ojolwo (2017) have identified floods as the major cause of natural disasters and according to Doocy (2013), "it has led to the loss of about 6.8 million human lives in the twentieth century". In the past 30 years the number of people affected by increasingly frequent hydrological events has doubled (World Economic Forum, 2010). According to the International Federation of Red Cross and Crescent Societies (IFRC) (2014), quoted in Whab and Ojolowo (2017), "the African continent has been the most vulnerable experiencing 64.6% of the 686 flood disasters resulting from hydro meteorological disasters, followed by Asia with 52.9% of 1,328 disasters events, Oceania 40.5% of 121 and America 40.5% of 846 disasters events". IFRC (2014) further reported that "176,615 people were affected by hydro-meteorological tragedies in 2004 of whom 66.6% resulted from flood events". Similarly, Jba, Bloch and Lamond, (2012) quoted in Wahab and Ojolowo (2017), reported that "floods in 1998 killed 4,000 people and caused economic losses estimated at \$25billion in South China while in July and August 2010, Pakistan was hit by devastating floods that killed 2,000 people affecting more than 20million people. In the same vain floods in January 2011 in South-Eastern Brazil, including Rio de Janeiro and Sao Paulo killed over 800 people".

Whab and Ojolowo (2017) equally identified "Laxity in urban planning particularly development control regulations and enforcement to be responsible for urban development in flood vulnerable areas in Lagos". Development control is one of the vital tools for effective physical regulation and planning of towns and cities. According to Dissanayake (1987), quoted in Wahab and Ojolowo (2017) "the mechanisms of development control include; zoning, subdivision regulations, building codes, space standards and density regulations employed by urban planners to regulate the use and development of land in order to implement local planning policies". ISDSR (2010) quoted in Wahab and Ojolowo (2017) noted "that construction of buildings on the flood prone areas without considering the ecological impacts has exposed the inhabitants to very high vulnerability".

Akinola (2012) reported that in West Africa, the number of people that died due to flood resulting from climate change was highest in Nigeria in the year 2010with (118), followed by Ghana (52), Sudan (50), Benin (43), Chad (24), Mauritania (21), Burkina Faso(16), Cameroon(13), Gambia (12), with other countries reporting less than 10 dead. Similarly, about 1.5million people were affected: most of them in Benin (360,000), followed by Nigeria (300,000), Niger (226,611), Chad (150,000), Burkina Faso (105,481), Sudan (74,970) and Mauritania (50,815). Other countries had less than 50,000 people who suffered from floods. The floods resulted in cholera epidemics which claimed 1,182 lives in Nigeria, followed by Cameroon, Niger and Chad (UN Office for the Coordination of Humanitarian Affairs - OCHA,2010).The

floods of 26th and 27th August 2011 that devastated most of the city of Ibadan and its environs claiming over 100 lives, rendering thousands homeless and destroying property worth billions of Naira is another consequence of climate change (OYOSG, 2011). Similarly, the floods of July 2011 that swept across Lagos and claimed over twenty lives, rendered many homeless and ravaged other parts of Southwestern Nigeria is another pointer to the eminent threats of Global climate change (Oladele, 2011; Vanguard, 2012; This day, 2012, Akinola, 2012).

The National Emergency Management Agency of Nigeria (NEMA) (2012) and Office for the Coordination of Humanitarian Affairs (OCHA, 2012) reported that the flood disaster which swept across the country in 2012, a consequence of climate change marked a watershed in the nation's history in disaster management as it was the most devastating. According to NEMA (2012), the 2012 floods affected 7,705, 3078 persons with 363 killed. A total of 18,200 persons were injured, 618,000 houses in 3,870 communities were damaged, 2.3 million were displaced 387, 153 were registered as internally displaced persons (IDPs) while 597, 476 houses were submerged (Ibileke, 2013; Ogboi et al, 2015). The total values of the destroyed physical assets caused in the most affected states were estimated at 1.48 trillion (US \$ 9.5 billion). NEMA (2012) stated further that the total value of the loss across all sectors of economic activity was estimated at N1.1 trillion (\$7.3 billion). The combined value of the damages and losses were estimated to be N2.6 trillion (\$16.9 billion) and the overall impact on real GDP growth in 2012 was estimated at 1.4 percent (N570 billion, in nominal terms).

The negative consequences of climate change are already here with us, for instance in 2018 in Nigeria, floods led to the death of about 141 persons, displacing 19,369 persons and destroying 5,732 houses including sources of livelihood (Ndujihe, 2018). According to the National Emergency Management Agency, NEMA, the rainstorms were the worst in the last six years after the 2012 floods. The 2018 floods have gone down memory lane as the most devastating in the last 40 years and could be attributed to human activities and climate change. Osun State was not left out of 2018 flood disaster where in Ile-Ife floods ravaged areas such as Parakin, Mayfair, Damico, Asherifa Estate and along Ede road among other areas where houses were submerged and many properties destroyed (Ndujihe, 2018).

Similarly, the Nigerian Hydrological Services Agency (NIHSA) (2019) had earlier predicted that a total of 74 Local Government Areas across the country would be flooded in 2019, during the peak of the rainy season. The report further stated that 36 states of the Federation including the Federal Capital Territory, are expected to experience different levels of flooding with Osun, Lagos, Benue, Oyo, Cross Rivers, Sokoto, Abia, Plateau, Abia and Edo topping the list. All across the country, the impact of incidence of floods have been devastating with estimated losses worth billions of Naira, lives lost and economies of many truncated. The 2019 floods in Osun state especially in Osogbo have wreaked havoc on so many communities. In Gbodofon area of the state capital the river Osun due to heavy down pour overflowed its banks destroying

buildings. According to Olaniyi (2019) the incessant rainfall caused the Olooyo river along Ipetu Ille-Ibokun road to over flow sweeping the only bridge linking Obokun Local Government to Osogbo. The route is very strategic to the economy of Osun as it connects Ikirun, Irabeji, Ipetu, Esa-Oke, Ijebujesa, Ilesha up to Ondo, Ekiti, Kogi States and the Federal Capital Territory.

Urbanisation has been identified as one of the principal drivers of land use change in the urban areas. It has been projected that by the year 2030, more than two thirds of the world's population constituting about 4.9 billion people will be living in the urban areas and this trend is expected to grow to 75% by 2050 (Laundry and Burke, 2014). Similarly, the United Nations observed that the African population is expected to grow into the future reaching more than one billion inhabitants by 2009 and may reach two billion inhabitants by 2050 (UN, 2010), hence, increased pressure on infrastructural facilities and resources especially land which will be required to accommodate the timid growing population.

Cities have persistent rate of growth with resultant effects on their carrying capacities and ecological footprints and may not be able to solve their own problems by linear urban management and development strategies. Therefore, it is worth noting that, previous rationalistic, mechanistic and technocratic approaches must be replaced by facilitative, participative, and flexible approaches with emphasis on guiding principles rather than strict rules (Oyesiku, 2009). All these require an urban systems resiliency framework for implementation. Urbanisation leads to the erection of structures such as houses and infrastructure such as roads as well as the replacement of greenery with concrete, asphalt and steel at the expense of agricultural land and forest. These concrete surfaces are known for their heat conduction, radiation and reflection which increase global temperatures and in addition to other human activities generate carbondioxide and methane which induce climate change(Akinola, 2012).

Urban flooding is a condition characterized by its repetitive and systemic impacts on communities whether or not the affected communities are located within floodplains or near any body of water (CNT, 2013). The problem of flooding also emanates from the poor maintenance of roads constructed without good drainages. There is also the negligence and poor attitude of people who dump waste into the drainages located along road side, which eventually blocks flow of both household sewage and storm water. It was at the backdrop of all these, that the study was conceived to assess flooding, and drainage systems in Osogbo metropolis with a view to providing pragmatic suggestions on improving on the present drainage systems to reduce threats to lives and property. The objectives of the study include; identification and characterization of the existing drainage network in Osogbo, assessment of the existing drainage system especially dredging and channelization and its impact on the social and economic status of the residents.



## **Conceptual Framework**

### **Vulnerability**

Vulnerability refers to susceptibility or exposure to physical or emotional harm. Vulnerability is one of the pillars on which resilience is rooted especially as it relates to environment or climate. This is so because people most likely to be vulnerable to impacts of environmental disasters are those who are least capable of developing robust and comprehensive climate resilience infrastructure and response systems i.e those living below the poverty line: thus the most vulnerable. This is so because their means of livelihood (incomes) are low hence they are likely to be those occupying the flood plains with not enough to eat, to cloth, house themselves talk less to have any resources to invest in resilient infrastructure and cleanup after any disasters (Gasu, 2015).

A vulnerability assessment of Nigeria shows that global climate change will have a strong impact on Nigeria particularly in the areas of agriculture, land use, energy, biodiversity, health and water resources (Ologunorisa, 2011). NEST (2006) quoted in Ologunorisa (2011), identified Nigeria's vulnerability to climate change to include the following:

1. High vulnerability due to its long coast line of 850km prone to sea-level rise
2. 2/3 of Nigeria's land cover is prone to drought and desertification
3. Its water resources are under threats which will affect energy sources (HEP)
4. Rain-fed agriculture and fishing activities on which 2/3 of the Nigerian Population depend primarily on for food are under serious threats.
5. Nigeria has a very high population pressure of 140 million people
6. Nigeria lacks the financial and technological capacity to combat the postulated negative impacts of climate change
7. Nigeria does not yet have a fully established institutional and legal frame work to combat climate change.

### **Resilience**

Resilience comes from the Latin word "resilio" which means to spring back. The British dictionary of Current English defines it as "the physical property of material that can resume its shape after being stretched or deformed; elasticity". Similarly, the same dictionary defines it contextually as the positive ability of a system or company to recover or adapt itself to the consequences of a catastrophic failure caused by power outage, fire, a bomb, flood or similar event". The Intergovernmental Panel on Climate Change (IPCC) defines resilience as "the ability of a social or ecological system to absorb disturbances while retaining the same basic structure and the capacity of self-organization, and the capacity to adapt to stress and change" (Tyler and Moench, 2012). In disaster management, "urban resilience is defined as the capacity of the urban environment to bounce back to normal life after a major disaster" (Coaffee, 2013). According to the Headington Institute, "resilience is the ability to bounce back or return to normal functioning after adversity". From the foregoing, "resilience can best be defined as

the ability of a system to absorb disturbances and still retain its basic function and structure” (Walker and Salt, 2006) has “the capacity to change in order to maintain the same identity” (Folke *et al*, 2010). Hence resilience encompasses both physical/natural and human systems (Ogbazi, 2015). Resilience is the capacity to mitigate, prepare for, respond to and recover from the impacts of disaster in a way which leaves communities stronger than before (Gasu, 2015).

Wilbanks, (2007) defines Urban resilience as the “capability to prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to public safety and health, the economy, and security of a given urban area”. Studies have shown that urban resilience focuses on three distinct threats; climate change, natural disasters and terrorism (Coaffee, 2008; Cadenasso *et al*, 2004). Prominent amongst the urban environmental management challenges is climate change which varies widely across geographical and developmental scales. A recent “study of 616 cities (home to 1.7 billion people, with a combined GDP of USD 35 trillion, half of the world's total economic output), found that floods endanger more city residents than any other natural peril, followed by earthquakes and storms” (Wikipedia, 2014). It has equally been observed that the alarming growth of urban population and the poor response of government are factors that have partly contributed to high rate of physical development mishap in cities (IFPRI, 2002; Helaakoshi and Merilainen, 2001 and Egunjobi, 1999).

According to Umberto (2012) “the capacity to transform at smaller scales draws on resilience from multiple scales, making use of crisis as windows of opportunity for novelty and innovation and recombining sources of experience and knowledge to navigate social-ecological transition”. It is therefore, important to note at this point in time “that resilience is not only about being persistence or robust, it is also about opportunities that disturbances open up in terms of recombination of evolved structures and processes, renewal of the system and emergence of new trajectories” (Folke, 2006).

Therefore a resilient city or community is conceived as a “sustainable network of physical systems and human community” while “the physical systems are the constructed and the natural environment components of the city such as buildings, infrastructural facilities, as well as soil, topography, geology and other natural systems” (Godschalk, 2003). The human communities are formal and informal, permanent and ad hoc socio-institutional components of the city such as family community organisations and agencies. Furthermore, “he conceives the physical systems as the body of the city, its bones, arteries and muscle while the human communities are the brain of the city” (Godschalk, 2003). According to Colding and Barthel (2013) quoted in Ogbazi (2015) “the key attributes of resilience are knowledge, diversity and self-organisation; and the interplay between disturbances and these three attributes are the key linkages for building resilience and adaptive capacity in social-ecological systems” as illustrates in figure 1.

According to Ogboi, et al., (2015), building resilience communities requires robustness (ability to withstand stress), redundancy (resource diversity), and rapidity (the ability to mobilise resources quickly). All these will ensure that communities, especially poor and vulnerable have the ability to plan their community and respond quickly to disaster and return to normalcy without any delay. Research has identified a number of individual and community institutional attributes of resilience which include but not limited to: self-efficacy, action coping, outcome expectancy, community participation, articulating problems, empowerment and trust as illustrated in Fig 1.



Fig. 1: Integrated model for Urban Resilience: Adapted from Galderisi, 2014 in Ogbazi 2015.

According to Ogbasi (2015) in Nigerian cities, the human resilience systems are obviously better developed than the physical system. This is because even in environments of scare or non-existent physical systems, many cultural structures of traditional societies such as strong family and kinship value, self- organisation, as well as socio-cultural identity that make up the human systems are still present to a reasonable extent in the cities.

## Research Method

### The Study Area

Osogbo is the capital of Osun State created in 1991. Osogbo Township is located almost at the centre of Osun State in South western Nigeria. It is about 88 kilometres by road northeast of Ibadan, 100 kilometres by road South of Ilorin and 115 kilometres northwest of Akure (Eades, 1980). It is situated between Longitudes 4° 28' 43'' and 4° 40' 12'' East and Latitudes 7° 42' 10'' and 7° 51' 10' North (figure 2). It is a vast area with an extent in excess of 4700 hectares with an urban population of 156, 694 inhabitants based on the 2006 Population Census and

projected to 195,433 in 2014. Osogbo has an average rainfall of 1150mm a year which lasts from April to late October or early November; though it eases off in July or August (Osogbo Meteorological Station, 2015).

The dry season lasts from December to March which is the period of intense heat. The climate is less humid and hot than it is in greater part of Southwestern Nigeria although the effect of the harmattan wind is strongly felt in the dry season. It lies mainly in the deciduous forest area which spread towards the grassland belt of Ikirun, north of Osogbo. Osogbo is situated on a raised land which is well over 500 meters (800 feet) above the sea level and is drained by River Osun and its tributaries such as River Ogbaagba, River Gbodofon, River Okoroko (okooko), Olohunkoro, and other streams. It is a city built on hills (Oke) such as Oke-balee, Oke-Onitea, Oke-Ayepjust to mention but a few. Geologically the land is made up of Precambrian rocks, the so-called basement complex from which the fairly fertile clayey loam of the surrounding district is derived.

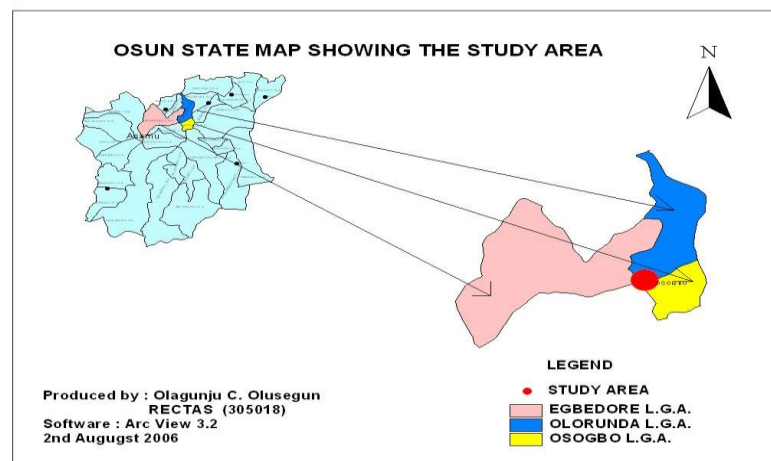


Fig. 2: Map of study area

Source: Updated from Olagunju 2006 in 2019

### Method for Data collection

The study made use of primary and secondary data to assess flood incidence and urban resilience in Osogbo. The buildings within the radius of 100 m of the flood plain were identified and counted using Google earth to be 1,953 while the streets were equally identified. Therefore, 10 % of the population was sampled where a total of 195 questionnaires were administered systematically on every 5<sup>th</sup> house after every third street located within 100m range of the flood plain. Moreover, 185 questionnaires were returned for analysis to evaluate the impact offlood incidence, urban resilience on the human environment. The questionnaires captured information on the following; socio-economic characteristics of respondents, method of waste disposal, drainage conditions and possible causes of flooding just to name but a few. Other information was gotten through directly observation from areas that have been

experiencing flood overtime such as; Rasco/Old-garage, Gbonmi, Obate-Okebaale, Ita-Olookan, Alekuwodo etc. The data was analysed using simple descriptive statistics. Likert scale made use of responses like; Very Significant (VS), Significant (S), Fairly Significant (FS), Less Significant (LS), and Not Significant (NS), the which responses were attached with weighted value of; 5,4,3,2, and 1 respectively to assess the possible causes of flooding in the study area. Advanced Spaceborn Thermal Emission Reflection Radiation (ASTER) data of the study area was used to create flood vulnerability maps using geospatial techniques. It was projected to the UTM coordinate system and clipped to the extent of the study area.

## **Result and Discussions**

### **Incidence of Flood in Osogbo**

The study generated a flood vulnerability map categorizing the area into highly vulnerable (0-100 m), moderately vulnerable (100-200m), not vulnerable (200-300m) and high grounds 300 m and above as shown in figure 3. In line with NISHA (2019) warnings and the reports of Olaniyi (2019), in the highly vulnerable and therefore, least resilient areas, the flood destroyed 20 hectares of farm land in Obokun, as the flood covered over 3 kilometers along Osogbo-Obokun-Ijesha road submerging many community farms and plantain plantations. Similarly, fish farms were swept by the over flow of the 264 dam along the Ring road. So many churches were submerged including the CAC church at Gbonmi, the Redeem church at Gbodofon and the CAC below Guaranteed Trust bank along Gbogon-Osogbo road just to name but a few. Schools were equally flooded amongst which were, Adekids and Rehoboth nursery and primary schools just to name but a few as illustrated in plate 1. The flood also damaged the only bridge linking four rural communities: Coker, Omu, Iyere and Osogbo along Osun Sate University Campus. Similarly, River Osun and its tributaries flooded over 200 houses, submerged several cars, buses, shops and workshops at Gdodofon area. Other areas affected include, Akindeko market, Alekuwodo area, Igbona, Old Garage Area, Rasco Area, Awosuru Area, Agunbelowoo, Mallam Tope area, , Idowu Ajibola area, Gbonmi area, Arungbo Estate, Ibu Amo community Gbodofon and Oniro-dunu Baruruwa community as illustrated in plate 2. The Alekuwodo river overflowed and took over the streets, market, residential houses and shops nearby sweeping away several food items. The Baale of Ibu-Amo of Awosuru area of Osogbo was displaced from his residence by the floods alongside many of his communities' members with their property submerged (Olaniyi, 2019). On the spot assessment confirmed that so many buildings have encroached on the flood plains and therefore do not have building permits which further reduces their resilience and increases their vulnerability. This was as a result of poor response of government to physical development mishap which is in tandem with studies by IFPRI, 2002; Helaakoshi and Merilainen, 2001; Egunjobi, 1999 and Whab and Ojelowo, 2017. Osogbo is blessed with a hilly topography which is not expected to face any serious challenge with drainage but due to the poor land management especially from development control department of urban planning, the town is experiencing a high magnitude of flooding. According to Osun State Capital Development Authority, Town

Planning Regulations in Nigeria require that a setback of 45 meter from a river and 15 meters from a stream be observed before construction but this is not the case as illustrated by plate 3 where buildings are sharing a common boundary with the river Osun at Gbodofon meaning there is no setback.



**Plate 1:** Adekids School flooded along the river Gbodofon flood plain in Osogbo.  
**Source:** Authors Field Survey, 2019



**Plate 2:** Houses flooded along the flood plains along Baruwa Street behind Methodist Church, Osogbo.  
**Source:** Authors Field Survey, 2019





Plate 3: Buildings constructed along the flood plain in Gbodofon area of Osogbo.  
Source: Authors Field Survey, 2019

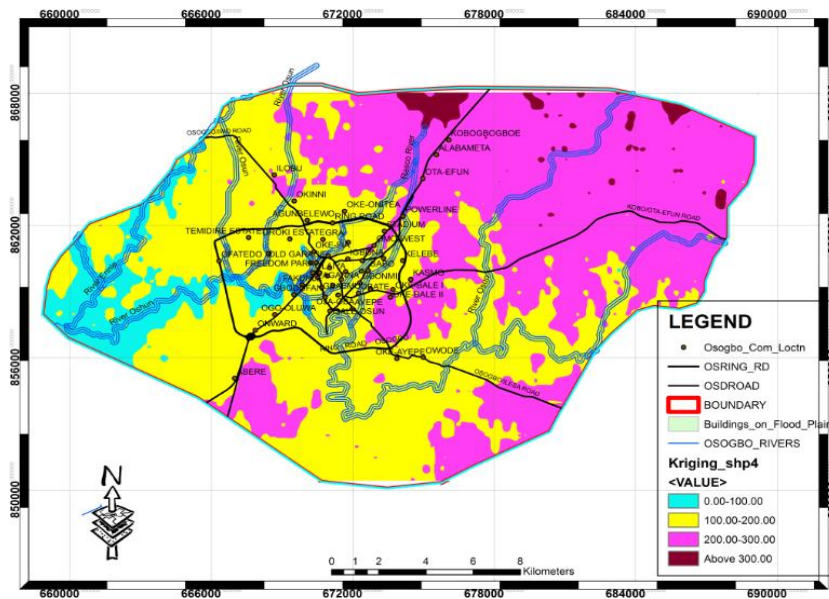


Fig. 3: Flood vulnerability map of Osogbo.  
Source: Authors Field Survey, 2019

**Table 1:** The possible causes of flooding in the area

SN	Variables	Rank					NR	SWV	MWV	RANKING
		VS (5)	S (4)	FS (3)	LS (2)	NS (1)				
1	Method of waste disposal	410	292	66	16	0	185	784	4.24	1st
2	Building along flood plain	284	332	102	20	2	185	774	4.18	2nd
3	Lack of drainage system	400	280	72	22	0	185	774	4.18	2nd
4	Topography	135	188	312	14	0	185	649	3.51	5th
5	Poor drainage system	325	248	87	58	0	185	718	3.88	3rd
6	Heavy rainfall	390	148	175	62	13	184	675	3.67	4th
	Total	1944	1488	832	192	15		4374	23.66	

Mean of  $\sum MWV/n = 3.94$

Source: Author's fieldwork, 2019.

The result in Table 1 shows that the possible causes of flooding in the study area in order of significance were their method of waste disposal which was ranked first (4.24), buildings constructed along flood plains (4.18), lack of drainage system (4.18) which were more significant all above the mean value of 3.9. Similarly, poor drainage system (3.88), heavy rainfall (3.67) and topography which were ranked the least (3.51) were fairly significant factors that contributed to flooding in the study area. The planning implication is that waste disposal was the most significant factor responsible flooding in the study area. It was observed that people dump waste in drainages and rivers which clog the channels and cause overflow into adjoining land uses thereby causing flooding as illustrated in plate 4. Poor drainage system and topography which were below the mean average and therefore less significant need to be improved upon to increase the resilience of the area for a better sustained human environment safe for human habitation. Therefore, flood resilient measures such as construction of drainages, flood retention and control infrastructure proper and channelization of the main rivers and streams should be undertaken.





**Plate 4:** Image flood incidence in Osogbo clogged with waste.

**Source:** Authors Field Survey, 2019

**Table 2:** Impact of dredging and channelization

SN	Variables	Rank					NR	SWV	MWV	RANKING
		VS (5)	S (4)	FS (3)	LS (2)	NS (1)				
1	Life	630	148	63	2	0	185	843	4.56	1
2	Economic Activities	265	380	96	6	2	185	749	4.05	5
3	Social Security	300	336	69	12	12	185	729	3.94	7
4	Environment	400	248	78	34	0	185	760	4.11	4
5	Health	500	132	114	24	2	185	772	4.17	3
6	Property Value	265	320	84	18	14	184	701	3.81	8
7	Aesthetic	180	228	246	16	2	185	672	3.63	11
8	Urban Agriculture	150	212	225	22	16	185	625	3.38	12
9	Flooding	170	340	108	46	6	184	670	3.64	10
10	Residential Accommodation	180	372	120	22	5	185	699	3.78	9
11	Aquaculture	200	160	216	34	16	185	626	3.38	12
12	Mobility	210	420	84	12	4	185	730	3.95	6
13	Safety	545	208	63	6	0	185	822	4.44	2
	Total								50.84	

Mean of  $\sum MWV/n = 3.91$

**Source:** Author's fieldwork, 2019.

Table 2 reveals the impact of dredging and channelization of flood plains on the social and economic lives of the people. It was deduced that the study identified in order of significance the impact of channelization and dredging on the people to include: livelihood (4.56), and

safety (4.44), health (4.17), Environment (4.11), Economic activities (4.05) Social security (3.95),) and mobility (3.95) which were all above the weighted mean value of 3.91 thereby enhancing their resilience. Similarly, property value (3.81), Residential accommodation (3.78), flooding (3.64), Urban Agriculture (3.38) and Aquaculture (3.38) were all below the mean value. This shows that the impact of flooding in the area does not only put them in a state of unrest but also affect their health, safety and mobility. It should however be noted that their resilience has been enhanced which has reduced their vulnerability through dredging and channelization of the flood plains by the State Government. Face to face interaction with some of them revealed that they have lived in the area for the past 24 years and this is probably the first time they are experiencing flooding of this magnitude. It was observed in the study area that most of the buildings that were affected by flooding were as a result of building on the flood plain, high intensity of rainfall and increased run-off which could be attributed to climate change as was corroborated in an earlier study by Yusuf *et al.*, 2013 in Lokoja Kogi State, Nigeria.

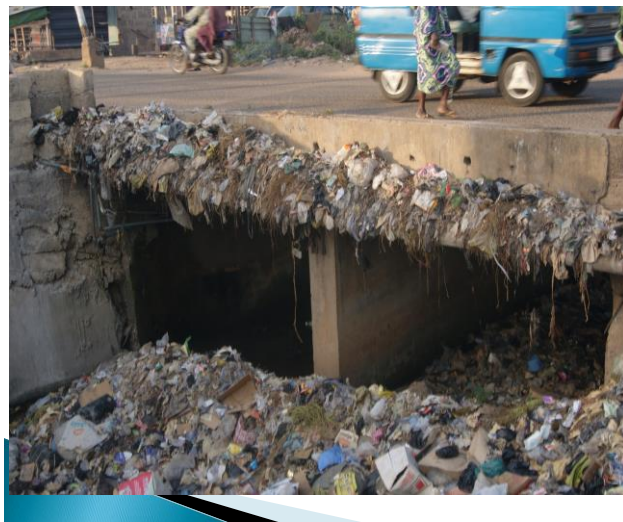
**Table 3:** Channelized and dredged water channels in Osogbo.

Location	Mitigation Measure	Length(m)	Width(m)
Gbonmi - Obate/Okebaale	Channelization	2,120	12
Ita-Olookan - Osun River	Dredging	148	15
Rasco-Alekuwodo	Channelization	798	11.7
Testing Ground - Gbonmi	Dredging	1,480	15.6
Asubiaro	Dredging	123	13.7
Rasco - BCJ	Dredging	2,170	14.8
Freedom Park-Olaiya	Channelization	676	10.6
Osun River - Olaiya	Dredging	1,128	15.3
Africa - Dada Estate	Dredging	4,200	14.2
Powerline - Kobongbogboe	Dredging	2,720	15.3
Ebunoluwa - Africa	Dredging	1,640	14.2

**Source:** Author's fieldwork, 2019.

Results in Table 3 revealed that flood have been well controlled in the areas that were channelized in Osogbo from 2011 till 2019 when the city experience flooding again. The result also revealed that a total of 13.7 km of channels were dredged while 3.6 km of streams were channelized which significantly increased the resilience of the city and reduced the level of flooding in these areas. It would be curious to observe that since 2011 of all the channelized streams only the section between Rasco and Alekuwodo experienced serious flooding in 2019 and this was as a result of the collapse of the of the '264 dam' which flows into this area. However, human attitude towards waste disposal affects the impact of dredging which could have reduced flooding in areas like Ogo-oluwa, Awosuru and BCJ. Plate 5 and 6 show typical

drainage channel and water channel study area at Obate and Rasco areas clogged with rubbish reduces channels and divert run-off into other areas thereby causing flooding.



**Plate 5.** Drainage channel blocked by waste at Obate area of Osogbo.  
b Authors Field Survey, 2019.

**Plate 6.** River channel blocked by waste at Rasco Area of Osoogbo in the dry season.  
**Source:** Authors Field Survey, 2019

### Conclusion

The study produced a flood vulnerability map categorizing the area into highly vulnerable (0-100 m), moderately vulnerable (100-200m), not vulnerable (200-300m) and high grounds (above 300m) which could serve as a guide to planners, development experts and policy makers. The study concluded that dredging and channelization has enhanced the resilience and reduced the vulnerability of the people in the study area. Similarly, channelization and

dredging has also reduced the negative impact of flooding thereby enhancing the social and economic liveability of the people in the area as well as contributed in making the area safe, healthy, and conducive for human habitation.

### **Recommendation**

Residential buildings within 0-100 m above sea level along the drainage channels, rivers and streams representing the high vulnerable areas within the flood plain, are recommended to be removed for safety of lives and property and to give room for dredging and channelization to enhance the resilience of the communities. The study also recommended that to build a resilient city; resettlement, environmental awareness, flood retention and control infrastructure, infrastructural development, proper waste disposal, channelization and strict implementation of urban development control measures need to be put in place early. It is important that more publicity should be made towards raising the awareness of people living on the flood plains on the danger of living in such vulnerable areas and on how household waste can be managed instead of dumping into drainage channels through the 3Rs (Reduce, Reuse and Recycle) to reduce flooding and enhance the resilience and the functional efficiency of drainage systems and enhance the liveability of the city.

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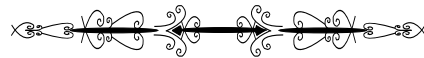
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## PERCEPTION OF THE ROLE OF SOCIAL MARKETING PRINCIPLES IN PROBLEM-BEHAVIOURS AMONG HERDERS-FARMERS IN NORTH-CENTRAL NIGERIA

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### Abstract

The study is concerned with the application of social marketing techniques in problem-behaviours among herders and farmers in Nigeria. Specifically, the study investigated the applications of the crises on national unity, the extent value based campaigns can be used to facilitate mutual understanding among warring parties and the role of social marketing techniques in mitigating problem behaviours. The survey study was based on 150 subjects randomly picked from social marketing teachers and students of NTA Television College, Jos, who had lived in any of the North Central States of Benue, Plateau, Nasarawa and Kogi. The study confirmed that the intermittent herder-farmer crisis is a major threat to national unity that could lead to dismemberment of Nigeria. It also upheld that social marketing techniques have the capacity to effectively address the problem behaviour in the country. The study advocate mainstreaming value exchange in social marketing campaigns as enabler of symbiotic relationship, understanding and co-operation between warring parties. The study concluded that the technique has been scarcely employed by stakeholders as a weapon in the fight against the menace and recommended it as part of the peace building architecture including establishment of skill acquisition centres.

**Keywords:** *Social marketing, Problem behaviours, Herdsmen-farmers Clashes, North-Central.*

### Introduction

The sanctity of life, culture of love, friendship and communal living that characterized the rural communities of North-Central Nigeria have been replaced by the evil of hatred, stereotypes and violence in this part of the country because of the menace of Herders-farmers crises. Indeed, the crises has become one of the greatest contemporary challenges confronting

the corporate existence of Nigerian Federation. Hardly, any day passes without the mention of herdsmen and farmers clashes in both mainstream and social media platforms. Image of human bodies machete, burnt and perforated by bullets are seen littered in communities. This confirms the position of Nweze (2005) that many farmers and herdsmen have lost their lives and herds, while others have experienced dwindled productivity.

Similarly, former President Olusegun Obasanjo in one of his open letters to incumbent President Muhammadu Buhari dated July 15, 2019 decried the activities of the Herdsmen thus: "This issue can no longer be ignored, treated with nonchalance, swept under the carpet or treated with cuddling glove. The issue is hitting at the foundation of our existence as Nigerians..... we are on the precipice and dangerously reaching a tipping point where it may no longer be possible to hold danger at bay"

This perspective was farther strengthened by Ajuwon(2004) who observed that in Imo State for instance between 1996 and 2005 nineteen (19) people died and forty-two (42) people sustained various degrees of injuries in the herders-farmers conflict. The Tiv Professional Group (2016), an umbrella body of the Tiv nation worldwide also attests that in Benue state, particularly the Tiv communities,73 members lost their lives. They also contended that Nigeria has lost 14 billion dollars as a result of farmer-herders clashes. The group also claimed that over 1,878 people have been killed in Benue state by herders in the last 10 years.

Interestingly, the herders equally roll out frightening figures of their losses of men and cattle. This menace has no doubt depleted human and material resources of the region and indeed Nigeria. This is attributed to problem behaviour associated with cattle rustling, destruction of arable crops and reduced land for farming and grazing. The violence is exerbated by perceived draconian laws formulated by state governments and perceived injustice on the part of authorities concerned as perpetrators are not penalised for murders committed during these clashes.

These clashes have lingered for decades within North-Central states of Benue, Plateau, Nasarawa and Kogi without a solution in sight. Scholars, institutions and government at all levels have devised and somewhat implemented policies and laws to curb this menace, yet the problem persists. Understandably, this issue has attracted intense national discourse. For example, 2014 national conference recommended ranching for cattle colony in Nigeria. The governments of Benue, Ekiti and Taraba state out-lawed open grazing through the enactment of anti-open grazing while Miyetti Allah Cattle Breeders Association insist that the solution to the problem is absolute restoration of cattle routes established by Colonial Masters in 1950s.

Absence of consensus from experts and scholars on the suitable solution to the problem makes it important to explore social marketing principles as an alternate strategy to build

understanding and synergy between the parties to halt the senseless spilling of innocent blood, wastage of national resources and restore trust and confidence between the parties to grow national cohesion.

### **Conceptual Clarification**

#### **Social Marketing**

The concept of social marketing is concerned with the application of marketing principles and tools to influence behaviours of target audience towards societal well-being (Kotler, Lee and Rothschild, 2006, Smith, 2006).

There is indeed a clear consensus among practitioners that social marketing is about influencing behaviours, employs a systematic planning process, uses traditional marketing principles and techniques, and its goal is to deliver positive benefits to society. Unlike commercial marketing which sells goods and services, social marketing sells positive behaviours and seeks to achieve any or all of the following objectives:

- a) Accept a new behaviour
- b) Reject undesirable behaviour
- c) Modify a current behaviour
- d) Abandon an old undesirable behaviour

#### **Problem Behaviour**

Operationally, problem behaviour refers to those behaviours considered negative, unproductive, offensive and does not conform to legal and moral standard of a society and therefore, unacceptable.

### **Literature Review/Empirical Review**

#### **Socio-Economic Implication of Herders-Farmers Unrest in Nigeria**

Nweze (2005) investigated the above phenomenon and concluded that herder-farmers clashes have led to loss of lives and properties while herders have also experienced dwindling productivity in their herds as a result of intermittent unrest. Akpaki (2002) further confirmed that farmers are increasingly competing with nomads for farmland, pastures, water, trees and the use of ranch land in general. This frequent uprising has also led to destruction of crops as cattle enter farms to feed on foliage of crops even in the presence of herdsmen who most times pretend not to notice the destruction (Tonah, 2006). This perspective was supported by Herzberg(1998) who averred that during harvest periods, cattle frequently destroy or eat ripened crops as they are led from the field to camps. Studies carried out by Okereke (2012) and Kasarachi (2016) have shown that, serious conflict erupts between Fulani herdsmen and farmers leading to loss of lives, valuable properties and destruction of vast expense of arable agricultural farmlands thereby posing serious threat to food security since farmers for the fear

of attacks could no longer go to farms and harvest their produce. The attack by Fulani herdsmen is on the increase particularly in Plateau, Benue, Taraba, Kogi and Nasarawa States.

### **Social Marketing and Problem-Behaviours**

Social marketing is often confused with advertisement. It is much more than product promotion but a discipline which draws on psychology, economics and anthropology to understand human behaviour on the basis of which products, services and messages are developed to match those needs.

Andreasen (2006) sees social marketing as programmes targeted at influencing the behaviour of an audience. The principles of the techniques can be used to change problem behaviours. Kotler and Lee (2008) strongly contend that the tools and principles of social marketing have been employed effectively to significantly reduce negative behaviours such as tobacco use, infant mortality, HIV/AIDS etc. Negative behaviours such as herders-farmers clashes have resulted in loss of lives and properties. However, the studies on effects of the application of social marketing principles do not concern Herders-farmers crises in Nigeria or elsewhere to the best of this researcher's knowledge. Therefore, a gap exists in the literature on the application and workability of social marketing principles in behaviour transformation of Herders and farmers especially in Nigeria hence this study.

### **Social Marketing Process**

Social Marketing works through systematic planning and application of traditional marketing principles and techniques with the main goal of positively influencing the behaviour of target audience. This process, according to Smith (2008) involves the creative paradigm that manipulates the marketing tools (also called marketing mix) to achieve the desired behaviour transformation.

Anderson (1998) also agreed that social marketing depends on commercial marketing techniques for planning, execution and evaluation of its programmes and thrives on rewarding good behaviour rather than punishing "bad behaviour". The technique seeks voluntary change of behaviours without the element of coercion.

Agbyoko (2018) contended that source credibility, channel integrity and accessibility are key to the success of social marketing campaigns. He also explained that systematic planning and implementation of social marketing programmes must adopt the following process to achieve the desired objectives:

- a) Developing plans and strategies using behavioural theories
- b) Selecting communication channels and materials based on required behavioural change.
- c) Developing and pre-testing materials

- d) Implementing the common program or campaign
- e) Assessing effectiveness in terms of exposure and awareness of the audience to message.
- f) Feedback in order to create, identify, implement and improve applications of social marketing strategies.

This means that in order for social marketing campaigns to succeed, the program must focus on

- a) Behaviour change
- b) Selling positive behaviour
- c) Sustained over a long time
- d) Audience focused
- e) On what the audience takes out.

Also (Agboola, 2009) argued that the principles of social marketing as a communication strategy can be used to transform problem behaviours. The author contended that in order for social marketing to achieve this objective;

- a) The messages for change of abrasive behaviours must be laced with incentives/value,
- b) The message must be designed in accordance with divergent personality and cultural needs of the target audience.
- c) The source of the message must be perceived to be trustworthy.

He rightly contended that social marketing principles have the capacity to serve as agents of behaviour change and counselled that the messages must focus clearly on the desired behaviour change.

### **Theoretical Framework**

The study is anchored on relationship marketing based theories. This is because these theories provide a framework for explaining and understanding principles that guide and also determine beneficial and enduring value-based relationship between the seller and the buyer. Consequently, the study will be based on one of the main relationship marketing theories "Social Exchange Theory". The theory was propounded by Blau (1964). The basic assumption of the theory is that relationships are predicated on the exchange of values between two or more people and that their mutual satisfaction is key to sustainable exchange behaviours. The theory explains that customer retention and loyalty is a function of healthy and mutual relationships between the parties involved in the exchange behaviour. This study will use the key principles of the theory namely trust, commitment and loyalty to build value based relationship among herders and farmers to maintain peaceful co-existence.

The choice of social exchange theory as a theoretical construct for the study is therefore based on its acknowledgement and appreciation of trust, commitment and loyalty as pillars of value based and sustainable relationships. Consequently, social marketing campaigns anchored on the above tripod principles are more likely to be effective.

### **Statement of Problem**

In Nigeria, there are many problem-behaviours among various demographic groups such as Boko haram, kidnapping, cultism, ethno-religious intolerance, armed robbery and herders and farmer's conflicts. These problem-behaviours have no doubt threatened the unity and co-operate entity called Nigeria. Expectedly, stakeholders including agencies of government, non-governmental organizations, community leaders and scholars have devised strategies to halt herders-farmers unrest to no avail. This study examined audience perception of social marketing role in curbing undesirable behaviours among herders and farmers. Consequently, the problem of the study is, can the application of this communication approach facilitate the understanding, co-operation and unity between farmers and herders in North Central Nigeria?

In other words, the study is concerned with the extent social marketing techniques can be employed to address the menace of farmers and herdsmen crises as perceived by social marketers.

### **Objectives of The Study**

1. To examine the effectiveness of social marketing tools in addressing problem behaviours particularly the farmer-herder's clashes.
2. To examine the extent authorities have utilized social marketing techniques in managing herders-farmer's clashes in Nigeria.
3. To determine the impact of social marketing techniques in curbing problems behaviours.
4. To examine the extent value based relationship between herders-farmer's will advance mutual understanding and symbiotic relationship.
5. Lastly, to observe the role of value exchange in social marketing campaign.

### **Research Questions**

1. To what extent are social marketing tools effective in addressing problem-behaviours (herders-farmer's clashes)?
2. To what extent have relevant authorities utilized social marketing techniques in managing herders-farmer's unrest?
3. What impact has the social marketing techniques in curbing problem-behaviour particularly herders-farmer's crises in Nigeria?
4. To what extent would the establishment of value based relationship between herders-farmer's advance mutual understanding and symbiotic relationship?

5. What is the role of value exchange in social marketing campaign?

**Method**

**Sample and Design**

The study adopted a survey design to investigate audience perception of the "Role of Social Marketing in problem behaviours among herders and farmer's in North-Central Nigeria". This design enabled the study to sample opinions of respondents who live or had lived in Benue, Plateau, Nasarawa and Kogi state.

**Participants**

Target population for this study were purposively selected from the NTA Television College Community (Unemployed, Civil Servants, Businessmen and women and students of Marketing) - who have lived in these chosen locations. They are 150 respondents with a mean age of 30.5 years.

**Procedure of Data Collection**

Management of NTA Television College, Jos granted approval for the conduct of this study after a letter of permission detailing the purpose of the study was sent. Potential respondents were selected based on the eligibility criteria (respondents who live or had lived in Benue, Plateau, Nasarawa and Kogi state). Afterwards, those respondents identified were explained the purpose of the study. Upon acceptance to take part, they were administered the questionnaires to fill.

**Measures**

The study employed a structured questionnaire (closed-ended), as it enabled the key variables to be measured and manipulated. The resulting questionnaire comprised of scale that measured social Marketing Principles in social behaviours with interest in herdsman and farmer's clashes.

**Statistical Analysis**

The data was analysed using a statistical package for social sciences (SPSS Version 24.0). Descriptive statistics were computed for both the psychographic items and demographic data for decision making.

**Results**

This study aimed at assessing the application of social marketing in problem behaviours among herdsman and farmers in north central Nigeria.

This section gave an overview of the results obtained in the research.

The results are as follows:



## Descriptive Statistics

Table 1.

Demographic Information		Frequency	Percent
Sex	FEMALE	103	68.7
	MALE	47	31.3
	Total	150	100.0
Occupation	Missing	22	14.7
	BUSINESS	28	18.7
	CIVIL SERVANT	15	10.0
	UNEMPLOYED	85	56.7
	Total	150	100.0
Education	Missing	15	10.0
	POST- SECONDARY	128	85.3
	SECONDARY	7	4.7
	Total	150	100.0
Religion	Missing	4	2.7
	CHRISTIANITY	129	86.0
	ISLAM	15	10.0
	UNDECIDED	2	1.3
	Total	150	100.0

### Demographic Information

Table 1 above which is a summary of the demographic information of participants shows that in general, the sample constituted more number of females (68.7%) than males (31.3%). The sample also showed that there are more participants who reported being unemployed (56.7%). Majority of the participants reported having post- secondary education (85.3%), while Christians(86%) were more than other religion put together. **Inferential Statistics**

### Research Question 1

**To what extent are social marketing tools effective tools for addressing the herders-farmers clashes?**

The research question will be answered from item 2 in section B of the questionnaire.

**Table 2.**

Do you agree that social marketing tool is the most suitable tool to address the menace? Cross-tabulation

		YES	NO	
PARTICIPANTS	Count	105	40	145
	% within PARTICIPANTS	72.4%	27.6%	100.0%
Total	Count	105	40	145
	% within PARTICIPANTS	72.4%	27.6%	100.0%

Table 2 above gives a summary of the responses of the participants as regards to the research question which addresses the extent to which social marketing tools are effective for addressing the herders-farmers clashes. A total of 145 (72.4%) participants' responded to item 2 of the questionnaire which directly addressed the above research question. According to responses given, 105 respondents ticked "Yes", agreeing that social marketing tool is the most suitable tool to address the menace of herders and farmers clashes while 40 (27.6%) ticked a "No".

### Research Question 11

#### How have the herders- farmers clashes become a national problem?

The research question will be answered from item 1 in section B of the questionnaire.

**Table 3:**

PARTICIPANTS \* 1. To a large extent, Herders and Farmers Crises in Nigeria is a constraint to national development because it discourages National Unity Cross-tabulation

		YES	NO	UNDECIDED	
PARTICIPANTS	Count	133	10	6	149
	% within PARTICIPANTS	89.3%	6.7%	4.0%	100.0%
Total	Count	133	10	6	149
	% within PARTICIPANTS	89.3%	6.7%	4.0%	100.0%

The result on table 3 gives a summary of the research question. According to the table, a total number of 149 respondents responded to the item and out of these, 133 (89.3%) respondents reported that to a very large extent, herders and farmers Crisis in Nigeria is a constraint to national development, because it discourages national unity. This indicates that, the target population believes that if allowed to continue, the herders- farmers clashes will become a serious national problem to the nation as it discourages national unity. This suggests that they do not support the herders-farmers clashes.

### Research Question 111

To what extent have relevant authorities utilized social marketing techniques in managing the herders-farmers crises?

The research question will be answered from items 7 and 8 in section B of the questionnaire.

**Table 4**

Participants \* 7. Employing social marketing techniques can help in creating mutual understanding and symbiotic relationship between the parties. Cross-tabulation

		yes	No	
PARTICIPANTS	Count	128	22	150
	% within PARTICIPANTS	85.3%	14.7%	100.0%
Total	Count	128	22	150
	% within PARTICIPANTS	85.3%	14.7%	100.0%

**Table 5**

PARTICIPANTS \* 8. To what extent is the Nigerian society aware of the significance of social marketing techniques in addressing behavioural problems? Cross tabulation

		to a greater extent	to some extent	not at all	
PARTICIPANTS	Count	37	94	19	150
	% within PARTICIPANTS	24.7%	62.7%	12.7%	100.0%
Total	Count	37	94	19	150
	% within PARTICIPANTS	24.7%	62.7%	12.7%	100.0%

The result on table 3 gives a summary of the research question. According to the table, a total number of 150 respondents responded to item 7 and 8. Based on the response given to item 7, 128 (85.3%) of the respondents ticked “yes”, indicating that employing social marketing techniques can help in creating mutual understanding and symbiotic relationship between the parties, while 22 (14.7%) ticked “no” indicating that they disagreed with the idea. However, from the response of participants to item 8 which asked about the extent the Nigerian society is aware of the significance of social marketing techniques in addressing behavioural problems, 37 (24.7%) of the respondents reported that Nigerian society is aware of the significance of social marketing techniques in addressing behavioural problems to a very large extent, while the majority of 94 (62.7%) believed it is only to some extent. The result

also showed that 19 (12.7%) believed that the Nigerian society is not at all aware of the significance of social marketing techniques in addressing behavioural problems?

This means that majority of the subjects of the study believe that inspite of the potency of social marketing principles in problem behaviour, majority of Nigerians including policy makers do not believe in it. This is a sad development and requires urgent action by practitioners to sensitize stakeholders on the profound value of this technique and to secure their buy-in.

#### Research Question IV

What is the impact of social marketing techniques in terms of converting hostilities between the herders and farmers into unity of purpose in Nigeria?

The research question will be answered from items 4, 5, and 14 in section B of the questionnaire.

**Table 6**

PARTICIPANTS \* 4. Do you agree that marketing campaigns (Products) are capable of converting hostilities of the warring parties? Cross-tabulation

		yes	No	
PARTICIPANTS	Count	112	35	147
	% within PARTICIPANTS	76.2%	23.8%	100.0%
Total	Count	112	35	147
	% within PARTICIPANTS	76.2%	23.8%	100.0%

**Table 7**

PARTICIPANTS \* 5. If 'yes', to what extent? Cross-tabulation

		to a great extent	to some extent	not at all	
PARTICIPANTS	Count	62	52	20	134
	% within PARTICIPANTS	46.3%	38.8%	14.9%	100.0%
Total	Count	62	52	20	134
	% within PARTICIPANTS	46.3%	38.8%	14.9%	100.0%

**Table 8**

PARTICIPANTS \* 13. Do you agree that the content in social marketing campaigns needs to be compatible with the dynamics of the target audience? Cross-tabulation

		agree	Undecided	not at all	
PARTICIPANTS	Count	117	19	6	142
	% within PARTICIPANTS	82.4%	13.4%	4.2%	100.0%
Total	Count	117	19	6	142
	% within PARTICIPANTS	82.4%	13.4%	4.2%	100.0%

**Table 9**

PARTICIPANTS \* 14. With effective channel management, the success of social marketing programme will be guaranteed Cross-tabulation

		strongly agree	Agree	disagree	
PARTICIPANTS	Count	84	55	5	144
	% within PARTICIPANTS	58.3%	38.2%	3.5%	100.0%
Total	Count	84	55	5	144
	% within PARTICIPANTS	58.3%	38.2%	3.5%	100.0%

Tables 6-9 above shows the response of participants on the perceived impact of social marketing techniques in terms of converting hostilities between the herders and farmers into unity of purpose. According to the results, table 6 revealed that 147 participants responded to item 4, of which 112 (76.2%) ticked 'Yes' that with effective channel management, the success of social marketing programme will be guaranteed to reduce hostilities between herders and farmers, while 35 (23.8%) ticked a 'No'. In responding to item 5 on the extent that effective channel management will guarantee curtailment of hostilities between herders and farmers, 134 participants responded as follows: 62 (46.3%) believed it is to a great extent, 52 (38.8%) believed it is to some extent while only 20 (14.9%) believed not all.

Taking a look at table 8 which addressed item 13 of the questionnaire on if respondents agree that the content in social marketing campaigns needs to be compatible with the dynamics of the target audience, out of the 142 respondents who responded to the item, 117 (82%) responded 'Agree, 19 (13.4%) responded with 'Undecided' while only 6 (4.2%) responded with a 'Not at all.

Finally, table 9 revealed that among the 144 respondents who responded to item 14 on if with effective channel management, the success of social marketing programme will be

guaranteed, 84 (58.3%) and 55 (38.2%) of the respondents responded 'Strongly Agreed' and 'Agree' respectively while only 5 (3.5%) 'Disagreed'.

The implication of the above is that proper management of channels of communication will greatly facilitate the achievement of social marketing campaigns.

### Research Question V

To what extent would the establishment of value based relationship between herders and farmers advance mutual understanding and symbiotic relationship?

The research question will be answered from items 11 in section B of the questionnaire.

**Table 10**

PARTICIPANTS \* 11. Do you agree that establishing value based relationship with the target market is necessary in combating clashes? Cross-tabulation

		strongly agree	somehow agree	Agree	
PARTICIPANTS	Count	73	48	20	141
	%	within51.8%	34.0%	14.2%	100.0%
PARTICIPANTS					
Total	Count	73	48	20	141
	%	within51.8%	34.0%	14.2%	100.0%
PARTICIPANTS					

Table 10 summarises the total responses of participants on their opinion about the extent which the establishment of value-based relationship between herders and farmers advance mutual understanding and symbiotic relationship. Of the 141 respondents who actually responded to item 11 of the questionnaire which directly addresses the research question, the table revealed that 73 (51.8%), 48 (34%) and 20 (14.2%) strongly agree, somehow agree and agree respectively that establishing value based relationship with the target market is necessary in combating clashes, which would advance mutual understanding and symbiotic relationship.

### Research Question VI

*What is the role of value exchange in the social marketing campaigns?*

*The research question will be answered from items 9 in section B of the questionnaire.*

**Table 11**

PARTICIPANTS \* 9. Do you agree that social marketing techniques should incorporate value exchange among the target population Cross-tabulation

		yes	No	
PARTICIPANTS	Count	132	10	142
	% within PARTICIPANTS	93.0%	7.0%	100.0%
Total	Count	132	10	142
	% within PARTICIPANTS	93.0%	7.0%	100.0%

Table 11 summarises the total responses of participants on their opinion concerning the importance of value exchange in social marketing campaigns.

This item directly addresses the research question on what is the role of value exchange in the social marketing campaigns. Of the 142 respondents who actually responded to item 11 of the questionnaire, the table revealed that 132 (93%), ticked a 'Yes' that social marketing techniques should incorporate value exchange among the target population while only 10 (7%) ticked a 'No', indicating that they 'Do not' believe that social marketing techniques should incorporate value exchange among the target population.

### Discussion of Findings

The outcome of the study confirmed that an ideal application of social marketing techniques will significantly help in addressing problem-behaviours (herders-farmer's clashes). 72.4% of the respondents agreed that social marketing tools is a suitable tool for addressing herders and farmer's clashes. This outcome further affirmed the finding of Kotler and Lee (2008) who opined that, over the years social marketing techniques have been used successfully to impact profoundly in public health, environment and community mobilization. The finding further collaborates the position of the scholars that the tools and principles of social marketing have been employed effectively in other climes to significantly reduce negative behavioural tendencies. On whether herders and farmer's clashes constitute a national problem, the outcome of the study indicates that 89.3% of respondents agreed that the herders and farmer's clashes is a threat to national unity. This undoubtedly remains one of the greatest contemporary challenges confronting Nigerian Federation presently (Obasanjo 2019).

In terms of authorities employing social marketing techniques in managing and creating mutual understanding among herders-farmers, the findings observed 85.3% of the sampled populations were of the opinion that these marketing strategies when employed will help to resolve the conflict and problem behaviours significantly. The finding is also consistent with the position of scholars that Social Marketing Campaigns can change attitudes and behaviours relating to violence (Campbell & Maganello, 2006).

Employing social marketing techniques, Mc Fadyen, (2003) advised that social marketers must adopt a definitive planning approach guided by the following key stages:

- i.) Defining key problem
- ii.) Defining objectives
- iii.) Understanding the consumer (target population)
- iv.) Segmentation and targeting
- v.) Inclusion of value exchange
- vi.) Developing marketing mix

The hallmark of above is that the social marketing approach to problem behaviours involves determining the root cause of the problem and designing appropriate communication strategies to curb the incessant clashes.

On the impact of social marketing techniques in converting hostilities between herders and farmer's in Nigeria, the investigation affirmed that social marketing techniques can be used effectively to curb the hostility between herders and farmers and also help in establishing a lasting relationship among the warring parties. Achieving this Must be through "bonding marketing" which involves the act of relating to, then influencing the feelings that drive the action of a targeted market (Griffin,1995).

Similarly, the study revealed that inclusion of value exchange in the campaigns can advance mutual understanding and symbiotic relationship between the parties. This finding confirms the position of Gronroos (1994) that there are many benefits in relationship marketing such as customer loyalty, ease of planning, engendering trust between parties etc.

Therefore, the significant role of value exchange in social marketing campaign was confirmed with 93% of the respondents in favour of the opinion that mainstreaming value exchange in social marketing campaign is key to curtailing the herders-farmers unrest in Nigeria. This finding tallies with the position of Houston and Gassenheimer, (1987) who contended that the strategy will satisfy the needs of the target audience and motivate them towards peaceful behaviours.

### **Conclusion and Recommendations**

It is crucial to carry out a study like this considering the danger this unrest poses to national security. Arguably, the parties involved in this unrest have been trading blames and governments' efforts have failed to curtail this unrest. It is these reasons that motivated the study to explore alternative strategy for sensitization and conscientization of farmers and herders to bring lasting solution to the problem. The outcome of the study and findings from other studies on the subject matter have confirmed that social marketing principles have the capacity to curtail the clashes between herders and farmers in Nigeria.



It is therefore recommended that:

In other for social marketing campaigns to be effective as a transformer of behaviour amongst farmers and herders there must be;

- i. Policy makers should use the tools of social marketing in the fight against the menace.
- ii. Social marketing campaigns must be based on value exchange as a drive for Herdsmen and Farmers to accept new behaviours.
- iii. Social marketing practitioners should organize themselves into formidable professional groups to promote the benefits of the communication approach to the Nigeria society.
- iv. The establishment of skill acquisition hubs, community-based counselling unit that will define behaviours that are acceptable to societal standards.
- v. Social marketing plans must include synergy among security agencies as part of peace-building architecture.

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## AN ANALYSIS OF THE IMPLICATIONS OF RAPID POPULATION GROWTH ON SUSTAINABLE DEVELOPMENT IN NIGERIA

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### **Abstract**

Population is an asset to every country if properly managed but it becomes otherwise if the level of its growth and means of sustenance do not coincide. In many African countries and Nigeria in particular, the rate at which population is rapidly growing is alarming and worrisome. The population is increasing at geometric rate while the means of survival is increasing at arithmetic rate. This level of population growth has posed a serious threat to development in the country. The paper aimed at ascertaining the implication of rapid population growth on sustainable development in Nigeria. The paper is purely conceptual and review literature concerning the stated problem. It is found from the reviewed literature that, rapid population growth in Nigeria has seriously affected virtually every aspect of our social institutions such as health, education, economy to mention but few. The paper recommended for the effective population policy and to also intensify enlightenment on the importance of contraception in reducing the level of fertility rate.

**Keywords:** *Population, Rapid Population Growth, Development, Sustainable Development*

### **Introduction**

Sustainable development has become a mirage in virtually most of the developing countries as a result of so many factors. Rapid population growth is one among many factors posing a serious threat to sustainable development in most of the developing countries. Population is an asset if properly managed, but it becomes a serious threat if there is no equal development/increase in the means of sustenance. Rapid population growth (RPG) refers to the state of over population in terms of existing means and resources. When the population growth rate is more than 2% and total fertility rate (TFR) is more than 2.1 per woman, it is known as the condition of rapid population growth (Auwal, 2018). While sustainable development in the other hand, refers to the way in which people use the available resources without running out. In other words, sustainable development refers to the development with sustainability that meets the needs of the present without compromising the ability of the future generation to meet their own needs (Brudland Commission). It simply means the

development where the present generation will benefit without compromising the existing resources for the future generation.

Nigeria is said to be the most populous country in Africa and the seventh most populous country in the world with the total growth rate of 2.6% and the total fertility of 5.4 according to National Demographic and Health Survey. This rapid increase in population has not geared toward improving the countries' economy hence leading to so many social and environmental problems, thus, high level of children malnutrition due to the highest level of unemployment, deforestation, poor electricity, poor modern health facilities, poor portable drinking water, poor standard level of education, increase in crime rate, pollution, erosion and many other socio-economic problems which make the sustainable development unrealistic. It has been pointed out by Malthus that when the population is increasing at geometric rate and the means of sustenance is increasing at arithmetic rate and left unchecked it may lead to adverse consequences to the economy. It has been noted that agriculture is the main stay of the rural dwellers which facilitated the level of population growth in the country. It is clear that when the flow of wealth is from children to parent then there is every likelihood to experience a higher fertility rate because having many children to work at farm and other petty businesses is translated as having a better economic wellbeing of the family. Most of the rural areas, the parents have high expectation from their children and spent a little on them. This upward flow of wealth from children to parent has significantly contributed toward the high level of population growth in Nigeria (Ahmad, 2017). The little development in the health care service delivery has reduced the level of mortality, while religion and cultural tradition especially in rural areas have become a serious threat to contraceptive use, male child preference and patriarchal nature of the country which exempted women from the family reproductive decision making also contributed to this menace of rapid increase in population. Therefore, for the sustainable development to be possible, government must double its effort in the provision of basic amenities every year to cater for the need of the populace. This paper, however, is aimed at examining the implication of such rapid population growth on sustainable development and proper a suggestion towards fertility regulation in the country.

### **Conceptual Clarification**

#### **Population**

This can be seen as a total number of people living in a particular geographic location sharing certain things in common. It is the number of inhabitants (either the total number or the number of a particular race or class) in a given place (country or city etc.). Population in other words refers to a collection of people alive at a specific point in time that meets certain criteria. For example, population of Nigeria as at December 30, 2006 or the population of Hausa in Gombe State on December 30, 2006. Thus, Demographers use the term 'Population' to refer to different kinds of collections that persist through time even though its members are continuously changing through attrition and accession (Preston, Hauveline and Guillot 2001).

Therefore, population is ever changing in its size, its composition and in its growth rates. These changes are related to births, deaths and migrations. Change in populations affects our lives in different ways that may not be seen by mere looking at the population. For instances, due to changes and rapid growth in population in most of the African countries and Nigeria in particular, it is not easily possible for the government to provide employment for all its citizens.

### **Rapid Population Growth**

Rapid population growth (RPG) refers to the state of over population in terms of existing means and resources. When the population growth rate is more than 2% and total fertility rate (TFR) is more than 2.1 per woman, it is known as the condition of rapid population growth. Nigeria is said to be the most populous country in Africa and the seventh most populous country in the world with the total growth rate of 2.6% and the total fertility of 5.4 according to National Demographic and Health Survey. This rapid increase in population has not geared toward improving the countries' economy hence leading to so many social and environmental problem, thus, high level of children malnutrition due to the highest level of unemployment, deforestation, poor electricity, poor modern health facilities, poor portable drinking water, poor standard level of education, high level of crime, pollution, erosion and many other socio-economic problems which make the sustainable development unrealistic. It has been pointed out by Malthus that when the population is increasing at geometric rate and the means of sustenance is increasing at arithmetic rate and left unchecked it may lead to adverse consequences to the economy. Rapid population growth posed a serious threat to development in most of the African countries and this has contributed to somany challenges in the affected countries. For development to be possible in African Countries and Nigeria in particular, the issue of high increase in population has to be tackled or the government most double its existing resources in every year in order to cater for the needs and demand of its population.

### **Development**

Development is a process that creates growth, progress, positive change or the addition of physical, economic, environmental, social and demographic components. The purpose of development is a rise in the level and quality of life of the population, and the creation or expansion of local regional income and employment opportunities, without damaging the resources of the environment. Development is visible and useful, not necessarily immediately, and includes an aspect of quality change and the creation of conditions for a continuation of that change. Development is both Qualitative and Quantitave which means a country cannot be considered as developed only because of the existing infrastructure such as schools, hospitals, recreational centers to mention but few without the equivalent development in the quality of lives of its citezen such as life expectancy, standard of living, human development etc. Development means having both good and standard basic amenities

that could cater for the demand of the population in line with the good quality of life, good standard of living, life expectancy and human development (Auwal, 2016). In most of the African countries, the basic amenities are nearly not in existence or in bad shape with very poor quality of life and standard of living. In Nigeria, vast majority of the population are living below the poverty line with poor health facilities, poor schools and so many environmental problems such as deforestation, erosion, flooding, desertification because of the high number of population and the government could not have tackled these issues because of the large number of population. If the government could not be able to provide gas, kerosine at affordable price to its citizens, the issues of environmental problems could not be addressed.

### **Sustainable Development**

Although there are many definition of sustainable development, the most used definition is that of the Brudland Commission (Cherin, 2006: Stoddart, 2011). Sustainable development means the development with sustainability that meets the needs of the present without compromising the ability of the future generation to meet their own needs. This definition stresses the significance of intergenerational equity. This issue of reserving resources for the future generation is what makes the development to be sustainable. Any development that cannot be stable for the longer period will not be considered as sustainable development. The overall aim of sustainable development is the long term stability of the economy and environment. This can only be possible when there is an integration of economic, social and environmental concerns throughout the decision making process. If the economic, social and environmental issues have not been put in to consideration by the government in its decision making process then the sustainable development can never be achieved. In most of the developing countries least concern has been giving to most especially environmental and social issues. These therefore make the available resources to be over used and ran out by the present generation which compromised the opportunity of the future generation. This has generated the problem of desertification due to the highest level of deforestation because the bulk majority of the population heavenly rely on the use of firewood.

### **Implications of Rapid Population Growth on Sustainable Development in Nigeria**

While population is considered as an asset and resources to every country but if it is level of growth is not properly managed, it could become a serious threat to the country. In so many years, the population in most of the African countries is not in consistency with the social, environmental and economic development of the countries. For example, the United Nations Human Development Index 2017 ranked Nigeria 157 out of 189 countries and among the 10 poorest nations in the world. Currently, Nigeria has overtaking India with about 86.9 million people living in extreme poverty which is 50% of its estimated population of 180 million populations (World Poverty Clock). The implications of rapid population growth need to be considered in the effort of every government or country to achieve sustainable development. Rapids population growth has serious implications on the following sectors;

- 1. Education:** Education is one out of many sectors that has been suffering from the consequences of rapid population growth. Thus, the Number of people requiring for admission at both primary, secondary and tertiary levels have significantly increase but there is no equal increase in the number of schools, and the available schools cannot accommodate all. The capacity of the present classes and other facilities have been exhausted and not sufficient already which increase the large number of dilapidated buildings at both levels. In so many cases, you will findout that a hundred of students are accommodated in a single class. A research by better education service delivery for all indicated that there are more than 13.5 million out of school children in Nigeria, in Gombe alone there are more than 500,000 out of school children. In Gombe State University alone more than 10,000 people applied for admission every year but the capacity of the school cannot admit more than 4000 students. It is important to note that education is critical to sustained development. Year in year out there is high increase in illiteracy level in the country, which is a limiting factor to sustainable development. The educational system suffers from deteriorating quality and insufficient investment to keep pace with the country's burgeoning school-age population. This is why the government replaced the Universal Primary Education with the Universal Basic Education Programme. The enrolment of children into basic education programme in year 2000 was 2.3 million, this increase to 2.9 million in 2005. The expanding enrolment in school has led to drastic reduction of teachers to pupil ratio, overcrowded classrooms, shortage of educational materials as well as a serious need for better funding of education sector.
- 2. Health:** health sector is among the various sectors that have been seriously suffering from the negative impacts of rapid population growth. It is evident that the bulk majority of the Nigeria's population are living in the rural communities; the health care facilities are virtually none in existence in most of the rural areas or are in bad shape. The insufficiency and/or nonexistence of such facilities have seriously contributed to the problems of such areas thereby increasing the rate of maternal morbidity and mortality, child mortality from many preventable diseases. Also, in urban centres, the health care facilities are not adequate enough to cater for the heath need of the people. In most cases, patients would go to the hospitals and find out that there is no bed space to admit them, there are not qualitative modern facilities to cure their illnesses, and this is one of the reasons why even the leaders are going to other countries to seek for medical treatment.
- 3. Environment:** this is another area that has been seriously suffering from the devastating population growth. The price of kerosene and gas are exorbitant to the extent that a common man cannot afford, this hike in the prices of kerosene and gas is what make the majority of the population to rely on either charcoal or firewood for

their day to day cooking and other activities, this in essence has contributed to so many challenges of deforestation, desertification, flooding, erosion and so many other environmental problem. Though, government has made so many efforts to avert these problems such as Nigerian Erosion and Watershed Management (NEWMAP), tree planting project and many others. Recently, the present administration in Gombe has introduced the program titled: Gombe Goes Green (G3) targeting to plant four million trees within the period of four years. Off course such programs will help but only if the government can provide adequate and affordable gas and kerosene that even a common man can afford. Our environment is also suffering in the rural areas from the problems of overgrazing, over cultivation, land fragmentation and many other factors that compounded the challenges faced by our nowadays environment as a result of rapid increase in population. The overall impact is a continued degradation of the ecosystem. Thus, if rapid population growth is not properly managed, the situation of the environment will further worsen.

4. **Housing:** Housing is one of the necessities of life. In Nigeria, the federal Government has employed the National Housing Policy which clearly stated that every Nigerian should have access to adequate shelter as a right. Thus, the story is total different because in the urban centres the major problems are shortage of housing, over population, overcrowding and the wide spread of slums and shantytowns. In the rural areas the houses are poorly constructed, unsafe and lack basic amenities such as electricity, good roads, portable drinking water, and many other necessities of life. The rapid rate of population growth in both the rural and urban centres has become a stabling block to the effective implementation of housing policy which make it difficult to provide adequate and sufficient housing to the citizens to make up for the current short falls and to provide adequately for the ever increasing population.
5. **Poverty:** poverty is one of the serious problem affecting our societies thereby causing a lot of menace such as the high rate of crime like the issue of kidnapping, boko haram, arm robbery, street hawking, out of school children, illiteracy, school dropped out children to mention but few. It is evident that the family is the basic unit of reproduction and production in every society. The influence of family's reproductive behaviour largely influences the growth rate of the population, its productive capacity determine the nation's wealth. Population size, growth rate and structure impact on the level of welfare of individuals and households. With limited resources, high fertility undermines saving and makes it increasingly difficult for families to adequately feed, clothe, house, educate and provide medical care for their children. In some rural areas, families with large numbers of children and where the traditional practices of dividing land at generation exists, this led to further fragmentation of small individuals farm holdings leading to low yield and low income.



In a situation of widespread poverty, high population growth rate is most unlikely to stimulate production and demand for goods and services because such a population lacks purchasing power.

6. **Labour force and employment:** labour force and employment has also been suffering from the bedevilling rapid increase in population. Year in year out, the number of people graduating from the tertiary institution is highly increasing, thus, the number of people demanding for employment is also increasing. Each year, not less than hundred thousand graduates are doing their one year mandatory National Youth Service (NYSC) while less than twenty percent (20%) may likely get government employment because the capacity of the government employment cannot absorbed all. Though it is evident that the population is the primary asset of the nation, the policy opines that rapid population growth place extraordinary demands on the ability of the economy to provide jobs for all new entrants to the labour force. With the high rate of population growth, the number of people in need of employment will rise dramatically each year. It will be difficult to create enough jobs for such large numbers of people even with government policy of job creation through different initiatives. It is important to note that employment itself is a component of development.
7. **Water and sanitation:** many of the families here in Nigeria are living below the poverty line which prevented most from affording nutritious food. This has resulted to the widespread of hunger and other related diseases. The high rate of population growth has affected the quality and quantity of food at the household level resulting to food insecurity in some communities. The large family size and poverty have increased vulnerability; and have hindered households from providing adequate nutrition for themselves particularly women and children. This has resulted into widespread of malnutrition such that many children below five years are stunted. The situation of high malnutrition has been attributed to negative cultural practices, lack of knowledge, such as low education of the population, especially for mothers, large family size, low income, inadequate food security and lack of food storage facilities, poor distribution and marketing system which occurred as a result of rapid population growth.
8. **Energy Resources:** Rapid population growth has also adversely affected the Nigeria's energy sector. Virtually all the rural dwellers largely rely on wood as their sources of energy and also the bulk majority of the urban people still rely on wood. At recent, there is a serious imbalance between the demand for wood and its supply. This has led to the massive destruction of the existing forest thereby causing a lot of environmental problem such as desertification, erosion, flooding, deforestation and many more. With this rapid increase in population, the demand of wood as the major source of energy will increase thereby posing a serious threat to our environment.

### **Conclusion**

It is evidently clear that there is a high increase in population in most of the African countries and Nigeria in Particular which cause a serious threat to sustainable development. While population is an asset to every nation but when its level of growth is not properly managed, it becomes a serious obstacle to the effort of government in improving the quality of life and standard of living of its citizen. It is clear that such rapid increase in population created some many challenges to our education, environment, housing, energy resources, Health and many other sectors. Sustainable development would forever remain a mirage if such level of population growth remains unchecked.

### **Recommendation**

1. It is therefore recommended the need for civic education and enlightenment targeting the practices that encouraged having a large number of children. For this rapid population growth to be slowed, this culture of having many children most especially in the rural areas must be broken.
2. There is also a need for awareness and enlightenment about the use of contraceptive. Most of people especially in the rural areas do not accept the use of contraceptives. Therefore, government needs to double its effort in creating so many programs emphasizing the need and importance of the use of contraception. Contraceptives also need to be made available and accessible in every nook and crannies of the country.
3. There is also a need to create a lot of skills acquisition centres across the country where youth will be trained on various skills which will make self-reliant. Creating many skills acquisitions centres will reducing the burden on government in providing employment to so many youth of reproductive age, it will also reduce poverty and the dependency level of the population.
4. There is also a need for the effective population policy that will regulate the level of fertility so as to minimize the level of population growth. There is a need for enforcing the policy on the citizen and a sanction on whoever violates the policy.
5. However, the challenges before the development planners, government and other corporate institutions is to strategize on civic education and public enlightenment at all levels on the place of education in national development. The girl child education should also be encouraged.

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## ASSESSMENT ON THE PROVISION AND FUNDING OF ELECTRONIC INFORMATION RESOURCES IN STATE UNIVERSITY LIBRARIES, NORTH-WEST ZONE NIGERIA

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### **Abstract**

*Purpose: The purpose of this paper is to investigate the provision and funding of Electronic Information Resources in University Libraries in North-West zone of Nigeria. The paper also finds out the types of Electronic Information Resources provided and how the Libraries studied sourced funds for managing the resources. Libraries around the world are moving at fast rate to provide digital library in order to meet the changing user need and requirement so the trend in Nigeria is for the libraries to provide information resources and services that user can access anywhere any time without necessarily coming to the wall of Library. A qualitative research methodology was used and narrative design was adopted for the study and purposive sampling was also used while semi structured interview was used for data Collection from twelve respondents which comprises University Librarians and Heads of ICT Units of 6 State University Libraries in the North-West Zone of Nigeria. The thematic data analysis was used to carry out the analysis of the data collected from the respondents. The findings revealed that a number of Electronic Information Resources are provided ranging from both online and offline databases, e-books, e-journals, CD ROM and other Internet based resources. It was also revealed that State University Libraries sourced their funds for the management of Electronic Information Resources from state governments, Tertiary Education Trust Fund (Tetfund) and Library annual budget. that there is a need for and the provision of more e-resources, and the Libraries should look for more alternative ways in sourcing funds through local and international nongovernmental organisation and philanthropists. There by reducing their total reliance on government and Library annual Budget. Findings of this study will be useful to information professionals in the institutions of higher learning particularly University Librarian who are top level managers that make policies for the enhancement as well as betterment information services in their Libraries*

**Keywords:** *Provision, Funding, Electronic Information Resource, University, Libraries*

### **Background to the Study**

Libraries have existed for thousands of years and are considered to be places where information resources and services are brought together for the purpose of sharing knowledge and experiences; these roles have been revolutionized by recent development in Information and Communication Technologies (ICT). The current information revolution and increasing impact of ICTs has modernized the process of learning and research in most University Libraries. Dafiagor (2012) observed that “expert systems, wireless network, virtual collections, interactive web interfaces, virtual reference services and personal web portals have brought changes since the beginning of the new millennium”.

However, there have been clearly significant moves from paper-based information to electronic access to information and knowledge for higher education. Though, the traditional functions and objectives of the Library remains the same, the method of information dissemination and the format are changing. The academic Library environment is in a state of transition in terms of resources and services; many information resources once available in print are now available in CD ROMs, Online and other available Electronic forms.

Financial resource is also fundamental in a Library system. In fact, the degree of financial adequacy determines the effectiveness of the Library. Ndekwu (1991) remarks that it has become a common knowledge that institutions of higher learning in Nigeria are underfunded and thus many services can no longer be adequately provided in such institutions. He argues that even when funds are available they are grossly inadequate because of the soaring prices of electronic and print resources.

### **Statement of Problem**

Electronic resources have become a critical part of the learning environment particularly in the higher education and it brings tremendous benefits to organizations and individuals to perform their work more efficiently Daulat (2014). The benefits of electronic resources also include provision of space economy; ease of access through numerous metadata, search engines, Online Public Access Catalogues (OPAC). In a study conducted by Oldy (2005), on the effect of funding in Nigerian University Libraries, the study found that funding is one of the primary economic elements and it's very important in the provision of Library resources. The study also found that, low level of funding in University Libraries had led to the deterioration in the quality of Library collection. The researcher then recommended that government which is the sole financier of the Libraries should see that it is adequately funded.

Moreover, Libraries around the world are moving at fast rate to provide digital Library in order to meet changing user needs and requirements. The trend in Nigeria is for the Libraries to provide e-resources and services that a user can access anywhere and anytime without necessarily coming to the walls of the Library. Many Libraries particularly state University Libraries in north-west of Nigeria have one form of e-Library or another or not having one.

However, little empirical evidences and research studies have been conducted on the types of information resources with regard to their Management. It is against this background this study is designed to examine the Provision and Funding of Electronic Information Resources in state University Libraries in North-West states of Nigeria with a view to finding out the challenges so that laudable solutions for effective management of these Libraries can be perform.

### **Objectives of the Study**

1. To ascertain the types of Electronic Information Resources provided in state University Libraries in North-West Zone of Nigeria.
2. To find out the sources of funding Electronic Information Resources in the Libraries under study.

### **Significance of the Study**

The result of this study will be useful to information professionals in the institutions of higher learning especially the University librarians who are the top level managers that make policies for the improvement and betterment of information services in their Libraries.

### **Scope and Limitation**

The study covered all the State University Libraries in North-west zone of Nigeria with exception of Sokoto State University Library which does not have the ICT Unit and e-resources. The study is also confined to e-resources and how they are funded in state University Libraries in North-West zone of Nigeria. Inability of the researcher to cover both federal and State Universities as such findings of this study will not be generalised to other University Libraries in the zone.

### **Review of Related Literature**

Electronic Information Resources are resources in which the information is stored electronically and are accessed through electronic systems and network. In this context the term primarily denotes "Any electronic product that delivers collection of data be it text, numerical, graphical or time based as a commercially available resources (Bevekenthy, Veeran and Salih 2003). Sadeh and Elingsen (2005) also asserted that, Electronic Information Resources are package of e- journals or Databases of abstracts and indexes that include full text of some articles referenced by the indexes. They further stressed that, Electronic Information Resources is the interface through which it is offered, and should be considered because these elements are intricately linked, even though they can be licensed separately. Dadzie (2008) was of the opinion that Electronic Information Resources are invaluable research tool that complement print based resources in any traditional Library setting. Similarly, Sabouri (2010) also define Electronic Information Resources are invaluable research

tools which complement print resources in traditional Library settings. They provide access to information because that might be restricted to the users because of geographical location or finances.

Smiths (2010) in his article *Changes in the Faculty Reading Behaviour* stressed that, The impact of electronic journals particularly Library access is integral to research activities where the vast majority of respondents reported that they read at least one article from an electronic source weekly. Furthermore, Electronic Information Resources are capable of providing services both within and remote to users irrespective of their location through electronic means. Gladney (2010) described a digital Library services as assemblage of digital computing and software needed to produce, emulate and extend the services provided by conventional Libraries based on paper and other materials means of collecting, cataloguing, finding and disseminating information, while the virtual Library on the other hand is said to be the one with a number of different information resources that can be accessed by an end user rather than delivering the end user to a physical set of resources.

Electronic resources are electronic representation of information; these are available in various formats like e-books online journals, e-magazines, e-learning, tutors and online test. Because of the effective presentation with multimedia tools, these e-resources have become the sources of information (Dadzie, 2005). According to Bothman and Holbig, (2010) Electronic Information Resources includes CD Roms, e-journals, and locally loaded databases, websites and abstracting and indexing databases such as Medline. They further stated that electronic resources also include products that aid in resources access for patron such as A-Z list open URL servers federated search engines and resources that provide full text context such as publishers electronic journal content, journal contents platforms such as project muse or Jstor and content aggregators such as Ebscohost, academic search premier and proxy servers or other authentication tools (Bothmann and Holmbig, 2010).

Financial resource is fundamental in a Library system Infact, the degree of financial adequacy determine the effectiveness of the Library. Nwalo (1997) opined that the poor state of funding of academic Library in Nigeria is most likely that the provision of Library resources and services that depend on finance will be adversely affected. It is assumed that it affects the main Libraries in Nigerian Universities and may likely affect the departmental Libraries too. Without an appropriate assessment of performance of departmental Libraries, the effect cannot be manifest.

Okiy (2010) stressed that academic Library is a very important sector of tertiary institution to her, the scenario of inadequate funding in tertiary institution Libraries by both state and federal government leave much to be desired. She further explains that University Libraries funding have continue to dwindle since mid-1980s along with downturn in the economic



fortunes of Nigeria, this has resulted in deterioration of the quality of resources, services and technology in the Library. The implication of this that many tertiary institution Libraries have not been able to acquire collection comprehensively enough to meet the need of their users. It could be seen from the literature reviewed that in most cases academic Libraries are underfunded in both Federal and State owned institutions. There are also problems within the institutions in general; that the management of these institutions doesn't consider Libraries as important, as such no priority is given to them.

Okoro (2005) asserted that Libraries are thus starved as of vital funds that should be used in developing their collection. Academic Libraries cannot be affectively developed without enough funds. Inadequate financial support to academic Libraries has much negative impact on resources development for the development of the Libraries. Ifidon (2006) states that as it stands now there is no known financial standard for the Library development. The situation is more precarious in academic Libraries as what is regarded as book budget is a will guess or an approximation of imagination. Edoke (2007) and Ifidon (2009) reported that book aid international and international donor agency has shown great concern over the problem in 2005.

Roseroka (2010) identified budgetary process and academic support as constraint facing University Libraries. She emphasized that research activities of faculty are rooted in the creation of knowledge and research process values. Personal interest informs and advance contribution to knowledge, teaching and course design. Without Library materials to support such influential stakeholders, the credibility of the Library is eroded.

It should be noted that there often, the recipients of fund assistance to Libraries through local or international NGOs and these may have a symbiotic relationship with such organization, particularly with regard to fund raising and income generation. Example of such organizations include Ford Foundation, World Bank, International Monetary Fund (IMF), United Nations Development Project (UNDP), World Health Organization (WHO), United Nations Childrens Fund (UNICEF), United Nations Educational and Scientific Cultural Organisation (UNESCO), BRITISH COUNCIL, Book Aid International (Dawakin kudu,2002).

The development of NGOs in Africa is very slow when compared to those in Asia and Latin America. During the colonial era, churches and missionary societies were the principals of health and education services especially in rural areas. Late in the colonial period ethnic welfare groups, women group and poverty alleviation organizations were involved. For instance, non-governmental organization has been aiding the development of knowledge and in particular Libraries.

According to Wise (2000) Nigerian Libraries have benefited from continued education opportunities overseas provided by Carnegie, Ford and other foundations such as British council, UNESCO and other organizations. Instances of such assistance have been documented from foreign organizations such as Carnegie cooperation New York, United Nations Scientific and Cultural Organization (UNESCO), United Nations Children's Fund (UNICEF), Ford Foundation, British Council and so on (Sharples, 1994). These organizations have been providing financial support and training aid to institutions and organization especially in developing countries such contribution contribute toward the development of education specifically Libraries in collection and services. Ibinoba (1997) further observed that Ford and Rockefeller foundation, Carnegie cooperation, United States Information Services and the British Council and Brother's brother (USA) have over the years made generous donations and aids to Nigerian Academic Libraries.

### **Research Methodology**

This study was designed to examine the provision and funding of Electronic Information Resources in University Libraries of North-West zone of Nigeria. The qualitative research methodology was found to be relevant for the study, because the respondents are not many and are in better position to answer the research questions. Qualitative research involves the collection of limited samples, intensive interviews, close interaction with respondents and careful transcription of verbal and textual data (Berge, 2004). The narrative based qualitative research design was adopted for this study. Narrative inquiry is the process of gathering information for the purpose of research through storytelling. The researcher then writes and narrates the experience (Trahar 2009). The researcher also used purposive sampling in selecting the participants. Purposive Sampling (Judgement Selective or Subjective Sampling) is a sampling technique in which researcher relies on his judgement when choosing members of the population to participate in the study.

A semi structured interview was used for data collection from the 12 respondents of 6 state University Libraries comprising the University librarians and the ICT heads. The Qualitative Data data analysis (QDA) was used to carry out the analysis of the data collected from the respondents

**Table 1:** List of all State Owned Universities in North-West Zone Nigeria

S/NO	University	Year of Establishment of Institution	UNI. LIBRARIAN	Head of Automation/ E-Library Unit.
1	Kano University of Science and Technology Wudil, Kano State.	2001	1	1
2	Kaduna State University, Kaduna State.	2004	1	1
3	Umaru Musa Yar'adua University, Katsina.	2006	1	1
4	Sule Lamido University. Kafin Hausa, Jigawa State.	2013	1	1
5	Kebbi State University of Science and Technology, Aliero	2007	1	1
6	Yusuf Maitama Sule University, Kano State	2012	1	1
7	Sokoto State University, Sokoto State.	2012	1	0
	TOTAL		7	6

**Source:** Preliminary Study November, 2018

**Table 2:** List of State Universities with E-resources and ICT Unit in North-West Zone Nigeria

S/NO	University	Year of Establishment Of Institution	NO. Of Respondents		
			University Librarian	Head of ICT Unit	Total
1	Kano University of science and technology wudil.	2001	1	1	2
2	Kaduna State University.	2004	1	1	2
3	Umar Musa Yar'adua University.	2006	1	1	2
4	SuleLamido University. Kafin Hausa.	2013	1	1	2
5	Kebbi State University of science and technology.	2007	1	1	2
6	North-West University Kano.	2012	1	1	2
	<b>TOTAL</b>		<b>6</b>	<b>6</b>	<b>12</b>

**Source:** Preliminary Study November, 2018

### Data Presentation, Analysis and Interpretation of Findings

**Table 3:** Background information of the participants

S/N	University	Year of Establishment	Rank	Qualification	Code
1	Kaduna State University Kaduna	2004	University Librarian. Head of ICT.	PhD LIS	P1
				MSc.Info. Sci.	P2
2	Kebbi State University of Science and Technology Aliero	2007	University Librarian. Head of ICT.	PhD Islm. Stds.	P3
				MLIS	P4
3	Yusuf Maitama Sule University Kano	2001	University Librarian. Head of ICT.	PhD LIS	P5
				BLIS	P6
4	North-West University Kano	2013	University Librarian. Head of ICT.	MLIS	P7
				BLIS	P8
5	Umar Musa Yar"adua University Katsina	2006	University Librarian. Head of ICT.	PhD LIS	P9
				BLIS	P10
6	Sule Lamido University Kafin Hausa	2013	University Librarian (Ag). Head of ICT.	BLIS	P11
				B.Sc Comp. Sci.	P12

Table 3 reveals that out of twelve (12) participants, three (3) had PhD in Library and Information science, one had PhD in Islamic Studies making a total of four (4). Three (3) had Masters in Library and information Science (MLIS), four (4) had Bachelor in Library and Information Science while One (1) with Bachelor of Science Computer Science. However, their rank ranges from University Librarians to ICT sectional Heads. This shows that the participants had adequate qualification in that respect.

The table also shows that the code given to each participant appeared on the table, the date and time within which the researcher conducted the interview was from 22 February to 30<sup>th</sup> March 2018. Moreover, the interview lasted for about forty-five (45) minutes in their respected offices. The table also shows the years in which the Libraries were established.

## Result and Discussion

**Question:** The researcher asked the participants on types of Electronic Information Resources (EIRs) provided in their ICT Unit.

**Response:** there were different types of (EIRs) provided. The participants have identified different (EIRs) provided in the State University Libraries under study.

**P1 & P2:** *The types of (EIRs) we have in this Library are Databases such as Science Direct, Jstor, Agora, Teal, Hinari, e-brary Bio-one, science direct, scopus, springer, proquest, cobhust etc. Online Reference Resources Such as Ajol, Doaj, Book boom and Institutional Digital Repository.* This indicated that the Kaduna State University Library has a large volume of both online and offline databases from the data collected, it also has digital institutional repository unlike other state University Libraries. it was also seen from the data collected that it has the highest number of available e-resources among the state University Libraries in North-West zone of Nigeria

**P3 & P4:** *Today we are having in stock volumes of Electronic Information Resources which consists of online electronic databases eg Jstor, Agora, Science Direct, Hinari, institutional repository which include manuscript and theses.* It was gathered during the interview that Kebbi State University of Science and Technology has some Electronic Information Resources such as online databases as well as e-books, e-theses and other internet web-resources. It also has a fair stock of Electronic Information Resources.

**P5 & P6:** *The types of (EIRs) we have in this our Library comprises of the e-journals, e-books CDs, databases and web resources ranging from Science direct, Ebscohost, Proquest, European American Journal, Agora, Hinary, Nigerian Vertual Library, Oare and Innearsk.* This clearly shows that Kano University Science and Technology has the above mentioned e-resources; both online and offline, e-books, CD ROM and other internet web resources. It also has a fair stock of Electronic Information Resources in their Libraries.

**P7 & P8:** *The types of Electronic Information Resources we are having today in this Library are e-books, e-journals, CDs, Audio visual information resources (Chamila), online databases such as Springer, Science direct, Jstor, Hinary, Agora and law scope.* It clearly shows that CD Roms, e-books, audiovisual information resources online and offline Databases are all available in North-West University Library. It also indicated that it has reasonable Electronic Information Resources in stock.

**P9 & P10:** *The types of Electronic Information Resources provided in this Library are e-journals and e-books Databases such as Sciencedirect, Elsevier, Ebscohost and Nexis Nexisz.* We equally have some open source Softwear such as Bookzizi and BookFi. The researcher gathered that they don't have institutional repository and CDs which are available in some state University Libraries in the

region, in terms of similarities, the researcher found out that a reasonable number of both online and offline databases are provided in this Library.

**P11 and P12:** *The types of electronic information we provide here are Offline databases, E-books CD ROMs and other web resources. It has been noticed that online databases are not provided, the institutional repository as well as Library portal is not available in this Library. Offline databases are provided just like the other state Universities Libraries in North-West zone.*

**Question:** The researcher asked the participants on sources of funding of electronic information resource as well as Library annual percentage spent on EIRs, and whether the percentage is adequate or not.

*P1p2: We source funds for the procurement of EIRs through Library annual budget from the University management and we also receive TetFund grant. At least 20% is being spent on the procurement of EIRs which is not adequate.*

From the above submission it was indicated that the source of funding Electronic Information Resources are through Library annual budget and Tetfund intervention only. There was no contribution from individuals or organisations and the annual Library budget spent on the Library received from University management stood at 20% which goes to procurement of Electronic Information Resources.

*P3p4: We source fund from the annual Library budget from the University management and Tetfund grant and I cannot ascertain the level of percentage spread on EIRs and the funds are not adequate.*

This indicates that the Libraries source funds through two ways that is TetFund and Library annual budget received by their University management just like other state University Libraries but there is no available data on percentage of Library annual budget spent on procurement of Electronic Information Resources.

*P5p6: We source our fund through Library annual budget received from the University management and tertiary education trust fund (Tetfund) but cannot ascertain the level of percentage spent on EIRs, and the funds are not adequate enough.*

This is however revealed that, they source funds through two ways; that is TetFund and Library annual budget received by their University management just like other state University Libraries. But there is no available data on percentage of Library annual budget spent on procurement of Electronic Information Resources.

P7p8: *We source our funds for procurement of EIRs here through Library annual budget, gift, donations and tertiary education trust fund (Tetfund). At least 60% of the Library annual budget is allocated to procurement of EIRs, and is adequate.*

This indicated that they source funds through three ways that is TetFund and Library annual budget received by their University management and they also received gift and donation from individuals unlike other state University Libraries while 60% percent of Library annual budget is spent on procurement of Electronic Information Resources.

P9P10: *We mostly source our funds from tertiary education trust fund (TetFund), state government annual (budget) and lastly donations from both local and international organizations as well as philanthropists. The percentage is not available but the funds allocated to the EIRs are fairly adequate.*

This indicated that they source funds through three ways that is TetFund and Library annual budget from their University management received from the state government. They also receive gifts and donations from individuals and organisations unlike other state University Libraries. The respondent also revealed that there is no actual percentage spent on the procurement of Electronic Information Resources just like other state University Libraries in North-West.

P11p12: *We source for the procurement of Electronic Information Resources from the annual Library budget from the University management but the percentage allocated to EIRs is not available.*

The data collected from this respondent shows that they used only percentage of money received for the Library. There is no available data on the percentage of money spent on Electronic Information Resources as revealed by the interviewee.

The result of the interview with regards to types of Electronic Information Resources provided indicated that, different types of Electronic Information Resources are provided ranging from e-books, e-journals, CDs, Databases (online and offline). It was only p11 p12 that has less Electronic Information Resources because it has been established recently. This shows that state University Libraries provide a number of Electronic Information Resources which include science direct, hinary, else view, ebscohost, springer, e-grannay, teal, agora, dione, jstore, e-book and CD-ROMs services. Evidently, this finding is in line with Boothmand and Holbig 2010 who stressed that EIRs include CD ROMS, E-journals, locally loaded databases, web resources, and indexing and abstracting Databases like medline.



Poor funding as major problem facing the management of EIRs in all the Libraries under study sourced their funds for EIRs through the Tertiary Education Trust Fund (Tetfund) intervention, donations from individuals, state governments and average percentage from the University management. This finding is in line with that of Bothman and Holmberg (2006) who highlighted some of the challenges associated with provision and management of EIRs as lack of consisting policy, staffing, budgeting and funding, change, communication, internet connectivity and user education.

### **Conclusion and Recommendations**

From the findings, there was clear indication of different types of EIRs provided and maintained in the Libraries under study ranging from e-Databases, online and offline, CD ROM, e-books, e-journals and other Internet web resources. This indicated that effort is being intensified by these Libraries to carry out their function of providing their users with relevant Electronic Information Resources as expected.

However, the findings on source of funding clearly indicated that state University Libraries largely depend on state government funds, Tertiary Education Trust Fund (Tetfund) interventions, some percentage of Library annual budget and donations from individuals. Considering the above findings by the researcher, the following recommendations are hereby made:

Even though reasonable EIRs are provided, there is need for the provision of more EIRs especially in the present digital era in order to cater for the need of Library users.

The Libraries should also look forward and find more alternate sources to fund EIRs in order to cope with transitions through local and international nongovernmental organizations and philanthropists. Thereby reducing their reliance on government and Library annual budget.

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## IMPACT OF SOCIAL NEEDS ON EMPLOYEE PERFORMANCE

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### Abstract

*This study examines the impact of social needs on employee performance. The study drew participant from three major manufacturing companies at Ewekoro in the state. A total of one hundred and six (106) respondents were purposively selected for study. Information was gathered from participants using five point Likert scale structured questionnaire. Data obtained was analyzed using Pearson product moment correlation ( $r$ ) through the use of Software Package for Social Sciences (SPSS). Findings revealed that majority of the responded that social needs through recognition has a strong positive effect on employee performance; also empowerment has a positive influence on employee performance, finally job autonomy and participation affect employee performance. The study recommends that the business organization should improve its employee social needs. The study also recommend organization should strive to improve on its social needs package given to their employees in other to get the best out of them. Also employees should participate in decision making so that they feel that their opinions are important for development*

**Keywords:** *Social needs, job autonomy, participation, employee performance, recognition*

### Introduction

Reward is one of the strategies used by Human Resource Managers for attracting and retaining suitable employees as well as facilitating them to improve their performance through motivation and to comply with employment legislation and regulation. As a result of these pressures, HR managers seek to design reward structures that facilitate the organizations strategic goals and the goals of individual employees.

Reward systems are very crucial for an organization (Maund, 2001). Rewards include systems, programs and practices that influence the actions of people. The purpose of reward systems

is to provide a systematic way to deliver positive consequences. Fundamental purpose is to provide positive consequences for contributions to desired performance (Wilson, 2003). The only way employees will fulfill the employers dream is to share in their dream (Kotelnikov, 2010). Reward systems are the mechanisms that make this happen. They can include awards and other forms of recognition, job enrichment, promotions, reassignments, non-monetary bonuses like vacations or a simple thank-you.

When organization meets up with the social needs of its employee, they get work done. Employers get more of the behavior they reward, not what they assume they will automatically get from employees. Thus when employees surpass their target or exceed their standard they should be rewarded immediately as a way of motivating them. By doing this, employees directly connect the reward with behavior and higher performance they have attained. Effective social reward systems should always focus on the positive reinforcement. Positive reinforcement encourages the desired behavior in organizations. This encourages employees to take positive actions leading to rewards. Social reward programs should be properly designed in the organization so as to reinforce positive behaviour which leads to performance (Torrington and Hall, 2006)

The efficiency of a person depends on two factors, firstly, the level of ability to do a certain work. So far as the first factor is concerned it can be acquired by education and training, but the second factor can be created by provision of social needs. A person may have several needs and desires, it is only strongly felt needs which becomes motives. Thus, motives are a product of needs and desires. Social needs are numerous and dynamic in nature, needs are invisible and directed towards certain goals. Social needs are things such as acceptance, appreciation, sense of belonging, recognition, organizational support, job autonomy and companionship.

Social needs are most often discussed in reference to Maslow hierarchy of needs, this theory ranks the needs of all human in order of importance. Maslow hierarchy of needs typically displayed in a pyramid with five levels. Social needs are placed at the third level, such needs are considered to be deficiency needs or something that is essential for growth and development. Social needs are met in variety of ways i.e. families meet the social needs of children, but later in life romantic partners, friends and co-workers further meet such individual social needs. The assertion that employees performance is directly related to their social needs has been corroborated by different authors. (Nouria, 2008). Employee resourcing is a tool used by organization to make sure that they get the employees needed and use them efficiently (Spector, 2000). People work with an organization and stay there when their needs are being met, most writers have established that the basic foundation for retaining high performing employees is to have them motivated through the adequate provision of social needs (Steer, 2004). This

is because a motivated employee is likely to perform better. This research is interested in investigating social needs and employees performance in an organization.

An organization for global manufacturer of brand-name products for consumers needed to improve levels of employee performance fast in order to improve performance. Managers focused on 'recognition, participation and job autonomy' as the key to raising employee morale. Every employee could nominate anyone they considered worthy of recognition.

### **Statement of the Problem**

In every organization social needs like recognition are observed basically to motivate the employees to get the best from them and increase their level of performance in the organization. Manufacturing organization is not an exception to that. But what has been irritating is that lot of the recognition programs have not been successful by increasing the overall performance of the organization (Gyurcik and Brawley, 2000). This had made various managements taking steps toward initiating new recognition programs over the years. In an organization people are very important. They can be the resource or they can be the burden. People can be fully committed if they are adequately motivated through recognition but before this can work out, the management must analyze the perception, attitude and thinking of the people of the organization to avoid a mismatch.

Other social needs that make employee feel a sense of belonging is employee participation but attitude of some organization does not allow some employee at certain level to participate in some management decision and deny them being responsible for some task. Therefore, their performance is bound to be affected when there is no recognition even if their participation is allowed. What are found in most work setting is annual increment in pay and promotion of employee across board based on some organization given yardsticks Strauss (2006)

Employee empowerment may be a sign that guarantees job satisfaction but researches has found through pilot study that many of managers does not recognize the real importance of employee empowerment and its effect on job satisfaction, on the other hand some managers belief that employee empowerment will reduce their authority. Empowerment in the workplace is an often misunderstood concept. Employee empowerment is a term that many managers and organizations think they understand, but few actually do, and even fewer really put into practice.

The absence of job autonomy creates melancholy (Stets, 1995) and frustration which results towards misbehaviour and felony (Agnew, 1984) creating serious problems for the organization. Although employees are hardworking and take seriously on their work, but still they seems to be less satisfied and lack passion which cause them to be less committed to the

organization. These problems happened as employees feel restricted from working freely and be a part in decision making regarding their own work by themselves.

### **Objectives of the Study**

The purpose of the study is determining the impact of social needs on employee performance. To achieve this, the following objectives would be pursued.

1. To examine the relationship that exists between employee recognition and employee performance.
2. To determine the relationship between job autonomy and commitment.
3. To investigate if there is any relationship between employee empowerment and employee performance

### **Conceptual Review**

#### **Concept of Reward Management**

According to Dolgoff, Feldstein and Stolnik (1997), Social needs are all social interventions intended to enhance or maintain the social functioning of human beings. According to Hong Kong Government (1979) white paper; Social need/ welfare can embrace all efforts aimed at improving health, education, employment, housing, recreational, and cultural services for the community at large. More also, in the word of Abraham Maslow (1965) there are five stages of needs and the third stages of needs that motivates human behavior is our need for social relatedness or love and belongingness Scott, Yeld, and Hendry, (2007) termed non-financial rewards as a vehicle to develop the value of reward programs to justify significance employees give to non-financial rewards. The CIPD (2011) research indicated that employees give more importance to non-financial rewards when determining where to work and the level of commitment to give to their work. Similarly, Fagbenle, Adeyemi, and Adesanya (2004) survey revealed that "Application of non-financial incentive schemes increases the productive time of bricklayers and consequently enhances productivity. These schemes increased the output from 6 to 26% and concreting activities measured on site. A social reward is a way to reward someone without giving money. It is often used as an incentive or bonus system for employees, whose goal is to motivate, retain, and attract high-quality people to your workplace (Ballentine, McKenzie, Wipocki and Kepner, 2007).

Non-monetary gifts reward the performance of employees through opportunities and perks. The rewards are inclusive of recognition, opportunities for training, independent working environment and so forth. The non-financial rewards are crucial to a worker due to their ability of allowing workers to acquire new skills as well as to pursue opportunities for advancement. For instance, a worker who graduated recently from school may consider a training program that is exemplary as better compared to his salary because of the feeling that the training has the ability to benefit him or her in the career that he holds (Allen, 2007).

Although standard organizations often have hardship experiences when offering incentives that are non-monetary, the extremes are not a negative as they could be thought of. This means that the benefits are higher when utilizing non-monetary gifts in organizations. Non-financial awards have the ability of enhancing creativity among the associates of an organization because when employees become aware that they will receive gifts that lack a monetary value, they tend to work even harder so as to rise above the limits as opposed to just complying with organizational rules and requirements (Shutan, 2010). This occurs because competitions among the employees are normally curbed so that every employee can work to better his career life as well as to achieve the goals of the organization that he/she works for. For instance, when workers become informed that they may get a T-shirt, they tend to work harder in order to give a better outcome in every task that they are assigned. This has the implication that non-monetary incentives enhance teamwork in organization, from the management up to the lower level employees (Ballentine, 2007). Through an economy of downward spiral that is normally constant, employers have a duty to keep on finding out about what rewards are appropriate for employee motivation without necessarily having to break the bank (Appelbaum, 2000).

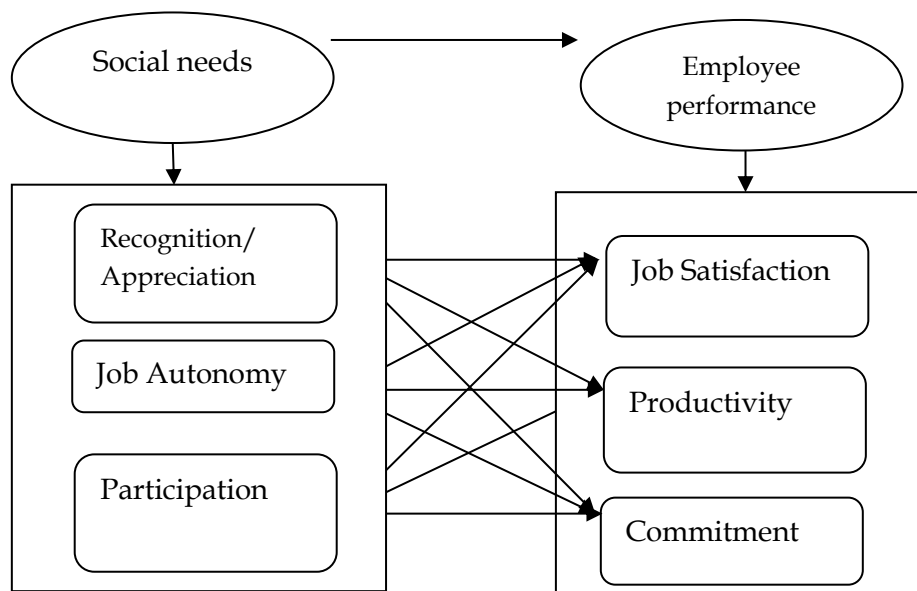
### Conceptual Issues- Social Needs

Figure 1.

#### Conceptual Framework

#### INDEPENDENT VARIABLES

#### DEPENDENT VARIABLES



Source: Authors' model (2019)

## **Love**

Love is not a word you often hear uttered in office hallways or conference rooms. And yet, it has a strong influence on workplace outcomes. The more love co-workers feel at work, the more engaged they are. (Note: Here we are talking about “companionate love” which is far less intense than romantic love. Companionship love is based on warmth, affection, and connections rather than passion). It may not be surprising that those who perceive greater affection and caring from their colleagues perform better, but few managers focus on building an emotional culture which ends up as a mistake. Employees who felt they worked in a loving and caring culture report higher level of satisfaction and teamwork, they end up showing up at work more often than others who felt otherwise. An example of an organization that practice a culture which have a companionate love can be explained as thus: i.e. Imagine a pair of co-workers collaborating side by side each day especially caring and affection towards one another, safeguarding each other’s feelings, showing tenderness and compassion when things don’t go well. Now imagine a workplace that encourages those behaviors from everyone, where managers actively look for ways to create and re-enforce close workplace relationships among employees. Surely not every manager will want to gather his team for a group hug everyday nor would every employee be comfortable with that, but there are many other ways to build an emotional culture of companionate love. Leaders can do these three things:

Firstly, broaden your definition of culture instead of focusing on Cognitive Culture, Values such as teamwork, results orientation, or innovation. You might think about how you can cultivate and enrich emotional culture as well. Emotional culture can be based on love or other emotions such as joy or pride.

Secondly, pay attention to the emotions you are expressing to employees everyday your mood creates a cultural blueprint for the group.

Thirdly, consider how your company policies and practices can foster greater affection, caring, compassion, and tenderness among workers. Most importantly, though, it is the small moments between coworkers- a warm smile, a kind note, a sympathetic ear day after day, month after month, that help create and maintain strong culture of companionate love and the employee’s satisfaction, productivity, and client satisfaction that comes with it.

## **Sense of Belonging**

The average workplace is often a struggle, work moves at the speed of technology, priorities change constantly and we must “do more with less”. In addition, every person is unique, has different skills, temperament, knowledge, skills and abilities. But no matter how different we are, we can find common ground that enables us develop a sense of belonging and work successfully together.



Humans are social animals, we are hardwired with a need for belonging and connection most of what we do and our need to belong drives our behavior to a certain level we define ourselves and measure our self-worth through our connection to others. We need to care about others and know that they care about us. In fact, our strongest emotions are tied to our sense of attachment and belonging- love and hate. Belonging is defined as a feeling of choosing, wanting and feeling permission to be part of a commonly group such as a work team, department company, volunteer organization, church, sports team, etc.

A sense of belonging gives us a feeling of being valued and respected. Research conducted by psychologist Geoff MacDonald and Mark Leary(1998) found that when we have a sense of belonging when we feel accepted, welcomed and included, we are likely to experience positive emotions such as happiness, calm and satisfaction. And as workers we are likely to; Be more patient Be more helpful to our coworkers with the need for personal gain Encourage and support one another Work more co-operatively as teams According to Greg Stewart, Professor of management and organization at the University of Iowa. A sense of belonging and attachment to a group of coworkers is a better motivator for some employee than money. The need to belong is often overlooked in the workplace, we don't do enough to facilitate connection while we often implement programs, systems, and structures that have a tendency to alienate and cause divisiveness. The impact of failing to create a sense of belonging with our employee not only affects how much they enjoy their work, it has a significant effect on their ability to be productive. There are ways to create a strong sense of belonging within organization: By leading with an inspirational mission and purpose that aligns and creates an emotional connection with all employees Encode and live by a strong set of values that guide both business and interpersonal behaviors. Emphasize things like respect, collaboration and fun. Set the expectation and train your leaders to be champions of your purpose and exemplars of your values, teach them how to be open, available and inclusive. Know and respect all employees as complete individuals with their own personal relationships, interests and challenges. Encourage positive social connection and enjoyment in the workplace Provide vehicles and opportunities for all employees to have a voice. When employees have their need to belong satisfied their energy is free to focus on higher level social needs such as achieving, satisfying the social need of your employee is critical to achieving a highly engaged and productive organization.

### **Job Autonomy**

Research work on work design by Hackman and Oldham in 1976 foreruns the concept of autonomy where it was seen as a core work design characteristic (Smith, 2003) which is by nature a kind of freedom and the quality or state of being independent, free, and self-directing Self-Determination Theory grounds the concept of autonomy which was introduced in 1970s when intrinsic and extrinsic rewards were focused (Lepper, Greene and Nisbett, 1973) and by

extending these rewards three indispensable needs in this theory, which were autonomy, competence and relatedness were offered (Deci and Ryan, 2000).

Research on self-determination theory demonstrates that the more independent the individual's enthusiasm, the better their perseverance and performance for the organization (Ryan, 2009) and further concentrates on the amount to which an employee's behavior is self-motivated and self-determined towards work.

Autonomy came into sight to set up a basis of what is superior to an individual (Parker, 1995) and is typically envisaged as a psychosomatic state; a kind of emotional development which we evaluate based on what we observe people doing (Spriggs, 1998), or it could include the situations like, behaving purposely, with accepting, and behaving free of controlling powers (Graaf, 2006). When we only talk about the term autonomy regardless of business, we come to know that it is the act of representatives who can realize and can make a choice what they will do (O'Neill, 1984) and is used in various ways from making independent choices to be a self-directed individual (Sneddon, 2001) who makes a decision to do things on the source of one's considerations (Henkel, 2005; McKnight, 1993).

Therefore, autonomy on work reveals the degree to which a work allows the liberty, self determination, and carefulness to routine work, take decisions, and choose the techniques used to do routine tasks (Morgeson, Delaney-Klinger and Hemingway, 2005) and appreciates the decisions which are made upon the basis of expertise and not on power of position (Gerwin and Moffat, 1997). Similar perception was identified about autonomy as the extent to which organization allows freedom and carefulness in job actions (Dee, Henkin and Chen, 2000) and was further elaborated and recognized as a choice of an individual, when applied, raises additional questions about whether employees perceive themselves as autonomous in moral decision making (Lütznén and Nordin, 1994) but when it comes to the culture of an organization, autonomy is a brooch of position, a pointer of a job's ability and accountability demands and, maybe an incentive for dependable and capable performance (Schwalbe, 1985).

It was researched by most of the theorists that whenever autonomy is chosen within the organization, employees should be motivated to behave in an obligated way (Coeckelbergh, 2006) which should be related to organizational performance by recognizing their responsibilities (Driedonks, Gevers and Weele, 2010) but sometimes this leads the moderate to overstate the value of autonomy (Crisp, 1989) and if everyone starts enjoying a high degree of autonomy, limitations must be forced (Brenkert, 1998) and the objections for liberally high autonomy are present in literature, which incorporates the delusion of the person's identity, the refutation of standards of fairness, not accounting for reasonable acts of paternalism, and not sensing sensible for the significance of personal associations (Ikonomidis and Singer, 1999) which would be the clear indication of lack of job satisfaction of an employee in within

organization. However, the relationship of autonomy and organizational performance was shown as positively correlated in a meta-analysis (Marchese and Ryan, 2001).

### **Employee Performance**

Sinha (2001) stated that employees' performance is depending on the willingness and also the openness of the employees itself on doing their job. He also stated that by having this willingness and openness of the employees in doing their job, it could increase the employees' productivity which also leads to the performance. Stup (2003) also explained that to have a standard performance, employers have to get the employees task to be done on track as to achieve the organization goal or target. By having the work or job done on track, employers could be able to monitor their employees and help them to improve their performance. Furthermore, a reward system should be implemented based on the performance of the employees. This is to motivate the employees in order to perform more on their task. There are several factors that being described by Stup (2003) towards the success of the employees' performance. The factors are such as physical work environment, equipment, meaningful work, performance expectation, and feedback on performance, reward for good or bad system, standard operating procedures, knowledge, skills and attitudes. Franco et al (2002) defined performance that relies on internal motivation but presence of internal factors such as necessary skills, intellectual capacity and resources to do the job clearly have an impact. As a consequence, employers are supposed to provide appropriate working conditions in order to make sure the performance of employees meet the required standards

Every organization has been established with certain objectives to achieve. These objectives can be achieved by utilizing the resources like men, machines, materials and money. All these resources are important but out of these the manpower is the most important. It plays an important role in performing tasks for accomplishing the goals. The question arises that how these resources are utilizes by manpower. Further, the business environment is changing drastically. The environmental factors are uncontrollable. These are beyond control of management of the firms. One has to adjust with the external factors to do the business in the market. Every environmental factor like social, cultural, legal, political, economic, technology and competition gets changed very fast. For effective working the knowledge of these factors is must otherwise the plan will misfire. In present situation it is difficult to predict about anything. It is uncertain to say that what will happen tomorrow. Again the need for highly skilled and dedicated manpower is felt who can give the best output.

### **Recognition and Appreciation**

When it comes to employers and employees having innate satisfaction, recognition and appreciation is two important tools for managers, businesses, Industrial counselors and HR professionals in promoting worker motivation and organizational success. Study done by (Mussie; 2013; Allen and Helms, 2002) revealed that it is very important for employers to

research regularly on expressing an appreciation to encouraged behavior of employees to reach strategic goals. Studies in Malaysia, Canada, Finland and North America confirmed that IT companies globally have been perceived as a high rate of employee turnover (Nurul et al, 2014; Tham et al., 2008; Westlund and Hannon, 2008). Based on the exploration among Canadian employees, the study revealed what Canadian employees are looking for in a job, though getting good pay, job security and benefits are an important area of the package deal, but are not along with the set of what these employees were expecting. In order word, the study substantiated that the Canadian personnel create a higher worthy of on being treated with respect, doing interesting work, a feeling of fulfillment and good communication among co-workers (Sia, 2012; Finders and Keepers - Recruiting and Retention Strategies, 2003). Recognition shows confidence in workforces", and confident workforces are more gainful. Thus, it is critical to tell your workforces you have trust in their abilities and skills and share with others the extent you esteem your workers. Affirming to (Paul, 2016) it was stressed that when employees" feel appreciated and esteemed for their commitments in the work environment, great results take after, including expanded worker commitment, less staff turnover, higher customer loyalty appraisals and the organization develops in its feeling of motivation. It was further revealed about the augmented interest on employee recognition programs in the working environment, to the point where more than 80 percent of organizations have some type of worker recognition, but at the same time work satisfaction has declined (Gallup, 2014; Globoforce, 2011; cited in Paul, 2016). Conversely, employee engagement remains low with just 30 percent of the workforce being effectively engaged. However, the study encouraged on the need to viably help workers feel genuinely esteemed and increased in value by their particular organization

### **Employees Empowerment**

The word "empowerment", popularized since 1980s, is employed to refer to a new form of Employee involvement (Wilkinson, 1998); it is derived from various approaches and fields of study such as psychology, economy, education, and social and organizational studies (Page and Czuba, 1999). The history of its first definition goes back to 1788, regarding empowerment as the conferment of power to organizational role of the individual. This power should be endowed to the individual or should be observed in his or her organizational role. The term "empowerment" is elastic and so it is not always clears what it means in different organizations. There are many definitions about empowerment. Employee empowerment is one of those terms that everyone thinks they understand, but few really do. Ask a dozen different people and you'll get a dozen different answers to the question, "What is employee empowerment?" In fact, research a dozen organizational theorists and you'll get as many answers to the same question.

The common dictionary definition of empowerment, "to give official authority to: delegate legal power to: commission, authorize" (Grove, 1971,) is the one most understood by most

people. As an example, Gandz (1990) writes, "Empowerment means that management vests decision-making or approval authority in employees where, traditionally, such authority was a managerial prerogative. However, this is not the definition of what is usually called employee empowerment. One author notes empowerment is, "easy to define in its absence – alienation, powerless, helplessness – but difficult to define positively because it 'takes on a different form in different people and contexts'" (Zimmerman, 1990,)

According to Nielsen and Pedersen, (2001), "employee empowerment" as defined by (McClelland, 1975; Conger and Kanungo, 1988) may be seen as part of the broader concept of "employee involvement" which also includes "participative management" (Lawler., 1992; Cummings and Worley, 1997) "job enrichment" (Hackman and Oldham, 1980), and "industrial democracy" (Poole, 1986. Nykodym., (1994) posit that employee empowerment or participative decision-making is neither a new or simple management concept; while Bowen and Lawler, (1992) point out that empowerment enables employees to make decisions and Pastor (1996) emphasizes the taking of responsibility for decisions made. From a mechanist or top-down approach, employee involvement is about delegation and accountability (Quinn and Spreitzer, 1999). Collins (1996) argues that that is a narrow definition of empowerment since it hinges more on accountability than any wider change in the process of work and decision-making which might be implied by a more active modeling of empowerment.

According to Olshfski and Cunningham (1998), empowerment is about delegation or sharing of power, authority or responsibility by those in the organizational structure to those lower levels of the organization. This in essence is the process of decentralizing decision-making in an organization where managers give more discretion and autonomy to the front-line managers. Wagner (1994) calls it a process in which influence is shared among individuals who are otherwise hierarchically unequal. Collins (1995) sees that as a limiting type of empowerment as at the end of it, the workers are empowered only in the sense that they have a greater responsibility to act within a narrow sphere and then held accountable for their limited action. Hickey and Casner-Lotto (1998) state that empowerment is about delegating directly to non-management employees a significant amount of decision-making authority commonly reserved for managers. They further argue that a truly participative organization is characterized by work systems that are structured to make employee involvement ongoing. This is what Estad (1997) refers to as the involvement of everyone, including both management and employees, that results into the disappearance of boundaries between formal and informal leader to that of an inclusive organization where there are "leaders of leaders". At that level everyone in the organization feels empowered. That kind of participatory management practice in a way balances the involvement of managers and their subordinates in information sharing, decision-making or problem solving endeavors (Wagner, 1994).

Conger and Kanungo (1988), define empowerment as a process of enhancing feelings of self-efficacy among organizational members through the identification of conditions that foster powerlessness and through their removal by both formal organizational practices and informal techniques of providing efficacy information. Brewer (1994), lending support to Conger and Kanungo's definition, posits that empowerment entails suggestion involvement that culminates into suggestion schemes, quality circles and job involvement where employees are in control of their jobs by designing job content. Collins, (1995) argues that democratic empowerment, represents a much more active, or activist model of empowerment that is representative of a process whereby workers gain or assume power and represent a process in which workers "act with a greater grasp and sense of their own powers". Consequently, empowerment only truly occurs when workers actively take the initiative and attempt to wrest control from managers

Pun, Chin and Gill, (2001) points out that empowerment is a process whereby employees are taking part or having shares in managerial decision - making. They further point out that true involvement draws people on the hierarchy up to the levels above them and then shares the power that is available. They however, point out that many conventional managers would see employee involvement as the giving away of control since true involvement draws people lower on the hierarchy up to the levels above them and then shares the power that is available. Most definitions of empowerment refer to some aspect of control- control over decision making, control over work processes, control over performance goals and measurement, and /or control over other people (Howard and Foster, 1999). Ford and Fottler, (1995) emphasize that the empowerment process necessitates the sharing of information and knowledge necessary to enable employees to contribute to organizational performance.

Taking a holistic approach to defining employee involvement, Kinlaw (1996) points out that it is the process of achieving continuous improvement in an organization's performance by developing and extending the competent influence of individuals and teams over the areas and functions that affect their performance and that of the total organization. He adds that empowerment also requires structural and systematic changes in the organization, like shortening the lines of communication and modifying reward systems.

### **Theoretical Framework**

Scholars and researchers have produced comprehensive theories based on social needs and employee performance. Although there are many theories of motivation, there are only a few that can be relevant and valuable for this study. These theories used in the theoretical\ framework tend to focus on the needs of the individual, trying to explain the different factors that contribute to either encouraging or halting a behavior within that individual. These theories are also appropriately known as "need-based theories." Some of the more famous

theories within this category includes Maslow's Need Theory and Herzberg's Two-Factor Theory (1959).

### **Maslow's Need Hierarchy Theory**

According to this theory there are two types of needs. Lower level and higher level needs. Lower level needs can be satisfied externally (extrinsically) and higher level can be satisfied internally (intrinsically). Lower level needs are the basic biological human needs such as food, shelter, sex and dress while upper level needs are those which individual strives to achieve after the satisfaction of the lower level such as self-esteem and self actualization. Walker, Churchill, and Ford (1979) pointed out that intrinsic rewards are intangible such as recognition, appreciation and praise. Whereas, extrinsic rewards are external and tangible and reflect lower-order human needs such as food, shelter and dress. In his theory Maslow (1943) also discusses that employees can be motivated by satisfying their needs. In work setting employees are motivated through recognition, an increase in responsibility, high status, appreciation and positive feedback. According to Maslow (1943) needs emerge as a hierarchy. When lower level needs are satisfied in the hierarchy, individual strive for the next level. We can say that when physiological, safety and social needs are satisfied, the individual strives for self-esteem and self-actualization. Hence, Maslow's hierarchy theory broadly supports the concept that reward and recognition (basic needs) and (self-esteem needs) of employees, if met, lead to satisfaction of the particular employee. The theory says that needs at different hierarchy level reflect reward and recognition. For example, physiological needs represent the tangible reward in the shape of salary and food. Social needs are intangible rewards provided by colleagues and superiors in the shape of encouragement, appreciation and positive feedback. Similarly, an individual strives for recognition which increases his / her self-esteem. It is the recognition that an individual want to receive for his / her performance. Broad (2007) argues that incentives, reward and recognition are the basic factors for motivation of the employees. Reward and recognition develop an enthusiasm among employees, increase their desire for work and also establish a linkage between performance and motivation of the employees. (Flynn, 1998) Deci (1975) explored that behaviors which are motivated by need for self-esteem, competence and self-determination are called intrinsic factors, while behaviors which are satisfied by reward are extrinsic. Porter and Lawler (1968) added that extrinsic and intrinsic reward enhances employee's performance and it will lead to higher job satisfaction. At organizational levels employee extrinsically motivated by providing them with higher pay and promotions. Recognizing the contributions of the workers will add to the strengthening of their self-esteem. It will extrinsically motivate them towards better performance.

### **Steve Rose Theory**

According to Steve Rose (2015), Human beings have social needs that are just as important as our biological need for food. In the same way we may risk death by starvation if stop eating, those whose social needs are not met may find themselves at risk of a form of extreme

emotional pain that leads to thoughts of suicide. Our fundamental need is a perceived sense of personal significance achieved through a perceived sense of both social belonging and social contribution. When either of these social need is not met and our sense of personal significance is threatened, we compensate through fight or flight responses in an attempt to restore or escape our lost sense of significance. When our sense of significance is fulfilled, we experience a high degree of subjective well-being, feel a strong sense of identity, belonging, interpersonal connection, social support, and maintain the sense that our efforts are contributing to a cause beyond ourselves.

### **Empirical Framework**

#### **Relational Perspective on Employee Involvement and Performance**

Employee involvement enables the organization to have a better insight about the way of functioning and where it can potentially make improvements that would be beneficial for both, the organization and the employees. There are many studies providing evidence that the employee involvement affects the organizational performance. Also, employee empowerment is considered an important contributor to organizational success. Much effort has been made to test the direct relationship between the level of employee empowerment and employee performance, and also, the job satisfaction and commitment. The findings show that there is a significant difference between the employee performance before and after the implementation of empowerment program. Among many dimensions of empowerment, delegation of authority has the strongest effect in improving the employee performance (Siami and Gorji2011). In another study, on a sample of 841 companies in Michigan, the findings suggest that employee participating programs contribute to firm's performance, and this contribution is stronger in the unionized settings (Cooke, 1994).

Jones and Kato argue that membership in offline team's results in enhanced enterprise performance. According to their estimates, team membership leads to rejection rates improving by about 27%. These findings provide evidence that the introduction of (and membership in) teams will produce more trust by employees in management, improved goal alignment between managers and employees and thus enhanced discretionary effort and attention to quality (Jones, and Kato2005).

In the study of direct participation and work organization, has been found that application of direct participation makes a positive contribution to a range of indicators of business performance such as output, quality, and reduction in throughput time as well as reducing sickness and absenteeism. Many studies have been carried out on worker participation and organizational performance (Kuye and Sulaimon, 2011; Ravenswood, 2011; Thornton, 2009; and Barringer and Bleudorn, 1999). They concluded that to increase workers' commitment and humanize the workplace, with the intention of improving firms 'performance and good citizenship behavior, managers need to permit a high degree of employee involvement in



decision making. Ray and Ray (2011) focused on SMEs and their findings showed that employee participation has positive impact on job satisfaction. Thornton (2009) established a significant relationship between frequency of employees' consultation and job satisfaction, while Spreitzer, Kizilos and Nason, (1997) found that workers who have greater choice concerning how to do their own work have high job satisfaction and consequently high job performance. The findings of Khattak, Iqbal and Bashir, (2012) also indicated that employee involvement and participation at work has significant positive effect on job satisfaction, leading to improved organizational performance.

There is growing evidence that firm performance rests increasingly on the involvement of workers in decision making (Arthur, 1994; Daft & Lewin, 1993; Deninson & Mishra, 1995; Spreitzer & Mishra, 1999). Scholars have argued that employee involvement contributes to organizational efficiency because it has the capacity to enhance the quality of decision making by increasing the inputs and promotes commitment to the outcomes of the decision making process in the workplace (Miller & Monge, 1986; Markey, 1990, 2006). According to Spreitzer et al. (1997), workers who have greater choice concerning how to do their own work have been found to have high job satisfaction and consequently high performance. A significant relationship between frequency of employee's consultation and organization commitment has also been established (Noah, 2008). While employee involvement may reside at the core of many contemporary practices and research, the extent to which organizational-level performance gains are actually achieved through decentralizing decision-making authority to lower level a employee remains unclear (Richardson et al., 2002). Latham et al. (1994) contend that there is much less research evidence for the value of employee involvement on quality decision making. Scholars have also argued that employees' involvement in decision making may primarily serve to make them feel good about their jobs and organizations but do little to increase firm's performance

The past studies showed that employee involvement entails the employee perception of his importance or identity with his own organization (Bandura, 1982, 1986; Stryker, 1986). It is the combination of several initiatives and is considered in analysis of precursor to empowerment (Lawler, 1986; Kanter, 1989; Lashley, 1999) Researches showed that the non-managerial staff has knowledge about their work process and combines specific skills and expertise like a group worker. (Levine and Tyson, 1990; Cooke, 1994; Hu Blerand Jirjahn, 2002).

### **Relationship between Appreciation, Recognition and Performance**

A distinct difference between appreciation and recognition was made by Chapman and White, (2011). It was explicitly explained that appreciation can be given or done intentionally, for example, you give appreciation when you appreciate someone for whom they are, and so you can intentionally recognize a person's efforts when the situation calls for it. Psychological or intangible rewards (intrinsic) like recognition and appreciation plays a very important role

in motivating staff and raising their performance. As opined by Fagley and Adler, (2012), “appreciation is genuinely attached to spirituality through a method of mutual relation, and each seem to be key influences in psychological and physical well-being and effective performance within the work setting, with every employee producing a definite impact and input”. Tanner (2009), articulated that appreciation is basic, every human need appreciation, every human craves for it, every human respond to it. Thus, that makes appreciation basic and significant to the success of any organizations. Consequently, to empower an organization, the people in the organization need to be empowered too. To empower individuals, leaders ought to demonstrate appreciation in ways in which it will maximize the impact for every individual in the organization (Chapman and Paul, 2011). For recognition and appreciation to be effective, they need to be personal and delivered in person (McClelland, 1989; Frodi et al., 1985). Thus, the employee with an honest performance can predict that their vital contributions are going to be completed and valued by the organization management (Bowen, 2000). Consecutively, recognition and appreciation includes a strong-willed and positive influence on worker performance

However, studies on employee recognition pointed out that IT sector is said to be confronted mostly with constant mobility of their highly skilled personnel. As a result, there is need to prevent these negatives result and find out the factors that influence within the IT organization which may lead to job satisfaction and increased job performance among the IT employees. Mussie et al., (2013) articulated that one valuable outcome and reason for recognizing employees is the fact that people who feel treasured are more positive about themselves and their capacity to contribute, i.e., employee recognition can improve productivity and increase satisfaction (Mussie et al; 2013; Gostick and Elton, 2007; Nelson, 2005; Daniels, 1999; Darling et al., 1997).An organization may use recognition as a standard measure to show employees that their contribution to the organization is acknowledged, and in so doing, influence their passion and job performance

### **Job Autonomy and Job Satisfaction**

The determination of job satisfaction has therefore become a focus of numerous recent studies. Previous studies have explained job satisfaction as dependent on a number of factors such as gender (Clark 1997; Galdeano 2001), own wage or income, relative wages (Clark and Oswald 1996; Hamermesh 1977, 2001), union activity (Borjas 1977) and mismatches between education and skill (Allen and Van der Velden 2001).

Among other factors believed to influence job satisfaction is job autonomy. More autonomy is expected to be associated with greater job satisfaction because workers have more freedom to determine their own effort and work schedule. Previous research in this area has been confined to the disciplines of psychology and sociology, and has been either qualitative in nature or relies on small, unrepresentative, samples of respondents (Anderson, Tolson, Filed

and Thacker 1992; Bhuiman, Al- Shammari and Jefri 1996; Birdseys and Hill, 1995; Landersweerd and Bousmans 1994; Schienman, 2002). Much of this research also ignores the issue of 'how much' job autonomy increases job satisfaction. Furthermore, very few of the studies that investigate the impact of job autonomy on job satisfaction fail to control for other determinants of job satisfaction, such as personal characteristics. The economics literature on job satisfaction has also ignored the multi-dimensional nature of job satisfaction, focusing instead on overall satisfaction with a job.

A further variable that may be expected to influence job satisfaction, and its various domains, is the degree of perceived autonomy that workers enjoy in the way they do their job. It is expected that a higher degree of job autonomy will lead to greater satisfaction. Several studies that have investigated the influence of perceived job autonomy on job satisfaction are primarily qualitative in nature and fall within the field of business research (Bhuiman. 1996; Birdseys and Hill 1995), sociology (Schienman 2002) and psychology (Anderson 1992; Landersweerd and Bousmans 1994; Weaver 1977). Most of these studies are descriptive in content, employ small and unrepresentative samples and often do not control for other variables such as personal characteristics. For example, Bhuiman. Focus on the influence of job autonomy on the job satisfaction of ex-patriots in Saudi-Arabia while Landerweerd and Bousmans focus on the influence of job autonomy on the job satisfaction of employee.

### **Research Design**

In this research, Predictive correlation research design was utilized to determine the predictive relationship between the independent variables (Social needs like recognition, job autonomy and participation,) and dependent variable (employee's performance), thus, a small sample size was selected form the whole population. Therefore, the findings were generalized to the whole population.

### **Data Source and Method of Collection**

The relevant data was collected from the primary source specifically through self-administered questionnaires

### **The Study Population and sample size**

The population of the study includes the entire middle level and lower level employees of some selected company in Ewekoro. The total workforce of the study is approximately two hundred fifty (250) employees as at the time of data collection. From the population a sample size of One Hundred and Six (106) Staff were selected from the selected company in total.

### **Method of Data Presentation and Analysis**

The method used in presentation of data is the simple percentage method with tabular presentation. The data collected were analyzed using the Pearson Product Moment

Correlation calculated automatically through the use of Software Package for Social Sciences (SPSS) version 21

### Test of Hypotheses

#### Hypothesis One

H<sub>01</sub> There is no significant relationship between employee recognition and organizational performance

**Table 1**

*Correlations*

		Recognition	Employees' work performance
Recognition	Pearson Correlation	1	.059**
	Sig. (2-tailed)		.000
	N	106	106
Employees' work performance	Pearson Correlation	.059**	1
	Sig. (2-tailed)	.602	
	N	106	106

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' field work (2019).

The correlation coefficient of the relationship between recognition and organizational performance is 0.059 with 0.602 probability of error. This implies that there is a positive relationship between recognition and organizational performance. The implication of this is that the hypothesis, which states that there is no significant relationship between recognition and organizational performance, was rejected.

#### Hypothesis Two

H<sub>02</sub> There is no significant relationship between employee empowerment and organizational performance

**Table 2**

*Correlations*

		Employee Empowerment	Employees' work performance
Employee Empowerment	Pearson Correlation	1	.127**
	Sig. (2-tailed)		.263
	N	106	106
Employees' work performance	Pearson Correlation	.127**	1
	Sig. (2-tailed)	.263	
	N	106	106

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' field work (2019).

The correlation coefficient of the relationship between employee empowerment and organizational performance is 0.127 with 0.263 probability of error. This implies that there is a positive relationship between employee empowerment and organizational performance. The implication of this is that the hypothesis, which states that there is no significant relationship employee empowerment and organizational performance, was rejected.

**Hypothesis Three**

H<sub>03</sub>: There is no significant relationship between job autonomy and job commitment

**Table 4.3.3**

*Correlations*

		Job Autonomy	Employee job commitment
Job Autonomy	Pearson Correlation	1	.960**
	Sig. (2-tailed)		.263
	N	106	106
Employee job commitment	Pearson Correlation	.960**	1
	Sig. (2-tailed)	.263	
	N	106	106

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' field work (2019).

The correlation coefficient of the relationship between job autonomy and employee commitment job is 0.960 with 0.000 probability of error. This implies that there is a positive strong relationship between job autonomy and employee commitment. The implication of this

is that the hypothesis, which states that there is no significant relationship between job autonomy and employee commitment was rejected.

### **Conclusions**

1. Conclusively, this project had been conducted vigorously and the research findings and recommendation are at its best.
2. It was found that job autonomy has a strong positive relationship with employee commitment. It is therefore concluded that employee commitment to work increases if they are given total freedom to work. The findings of the present study point out employee empowerment have a positive relationship with employee performance. Also increased performance is guaranteed if employees are well empowered by the organization.
3. Recognition and appreciation has a positive relationship with employee performance. Employee performance improves if employee is recognition and appreciated.

### **Recommendations**

Having dealt with the topic, impact of social need on employee performance, therefore, with respect on the study and major findings discussed above, the following will be proposed to the management.

- i. It is therefore recommended that organization should strive to improve on its social needs package given to their employees in other to get the best out of them.
- ii. Management should also provide the employees with more organizational freedom and respective autonomy.
- iii. Employees should participate in decision making so that they feel that their opinions are important for development.

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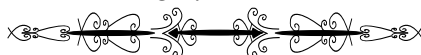
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## THE PRE- SERVICE TEACHERS' AWARENESS OF BIO-ENTREPRENEURIAL SKILLS OPPORTUNITIES IN BIOLOGY, AS A MEANS OF ECONOMIC DEVELOPMENT (A STUDY OF SOME SELECTED COLLEGES OF EDUCATION IN BORNO STATE, NIGERIA

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### **Abstract**

*The Study explored the roles played by Bio-entrepreneurial skills opportunity in Biology education as a means of economic development in some selected institution of higher learning in Maiduguri Borno State, Nigeria. Four Objectives were raised and four research questions were answered in the study. The research design employed was descriptive survey design. The targeted population of the study was 500 NCE three Students for the two selected colleges of education. Out of this number, 250 prospective NCE-teachers were selected using simple random sampling from the list of prospective NCE graduates. Questionnaire and unstructured interview was developed by the researcher based on the four (4) research questions of the study. The face and content validation of the research instrument was established by expert in Science education from the University of Maiduguri, and the instrument yielded a coefficient value of 0.85, Data collected were analyzed using descriptive statistics of frequencies and percentage to answer the research questions. The findings revealed that there are many entrepreneurial skills that should be acquired by the pre service teachers in Science Education. Also the result revealed that 80% of the prospective NCE graduates (respondents) agreed that they were not aware of the entrepreneurial skills opportunities available in Biological science. Furthermore, respondents also agreed that entrepreneurial skills acquired would no doubt helps in eliminating the deepining rate of economic recession and further improve the economic development in the State. Based on these findings, it was recommended that the teaching of these skills should be part of the college curriculum and must be taught to teachers to be, in addition to the theoretical aspect. Government should also allocate enough fund to these colleges so that the new innovation could be sustained especially in any field of Science Education.*

**Keywords:** *Biology education, Bio-entrepreneurial Skills, Economic development*



## **Introduction**

The roles play by science and technological education in the growth and development of the national economic cannot be over emphasized. Any nation with priority in science and technology education will among other things improve its economic growth substantially hence reduce the impact of the menace due to global economic depression. In their study strategies for combating global economic crisis in Nigeria through science and technology education. Udugo and OJIAKU (2012) cited Abba, (2010), that developed nations like U.S.A, Japan, who acquired their prosperity through science and technology advancements are leading in industrialisation because their scientist passes greater amount of technical know and know practice them than the rest of other nations world.

According to Kumuyi (2010) advised that the reactions call for every ones' hand to be on the spindle so as to overcome the enosis before us. He maintained for attention should be directed to science and technological education which are the base of any nations development and sustainable. According to Chaston (2009) Economic recession is define as economic go slow which brings an economy to low ebb and maintained, that it can be explained as a difficult time for the economy of a country. A period when a country experience less trade and industrial activities that often result in high unemployment rate, redundancy, business short down or systematic distress of business venue. Which subsequently generate hardship, high eve poverty, frustrations unbearable misery that usually push the business into financials slump, income down or collapse or investment? Through scientific knowledge the general public must be given the powers which enable them to explore the natural endowment by creating resources. Conqueror qualities of life. It is in that light that pamper and humble (2009) describe science and technological education as a process of teaching in school to improves one knowledge about the environment and to develop one's environment and to develop one's skill of systematic enquiry. But due to economic recession in Nigeria face many challenges such as social, economic environmental which results into unemployment and poverty. It is on this premises that Nigerian government in the recent times compelled to initiate the training of youth in various entrepreneur skills which is aimed at making individual being gainfully self-employed. Aniamaa and Salome (2017) stated that science and technology offer a lot in socio economic and cultural development of any Nation. It is dynamism and the introduction of new technologies has influenced new discoveries and development in biological knowledge.

Therefore, sound education is needed for reveal biology skills which are necessary for providing entrepreneurship skills which is aimed at making individual being gainfully self-employed (Aniama Salome, 2017) science and technology offer a lot in the socio economic and cultural development of any nation. Its dynamism and the introduction of new technologies have influence new discoveries and development in biological knowledge. The great potential biology has a discipline cannot be over emphasized this goes to said that achieving the

millennium goals a been giant economic will require among other things indicating in the students of biology at all levels of entrepreneurship skills. This focus is currently being lacking in the Nigerian educational system leading to production of many graduates who are not either gainfully employed or self-employed. This is line with Offormas (2005) advice as she said that for Nigeria to become a key player in the world economy of the 21<sup>st</sup> century, the educational system should provide job creators and job seekers. Togoe (2012) stated that education is the process of conveying usable information to group of learners. similarly, (UNESCO 2011) quality education is one that satisfy basic learning needs and enriches the level of learners and their overall experience of learning therefore to achieve education, relevant knowledge skills and attitude that are necessary national development must be taught to the student for sustainable development education should be given top priority because it does are open to onto lift them out poverty by through economic growth and national productivity.

### **Problem statement**

Biology education is one of the science subject been taught at secondary and tertiary levels of education in Nigeria. And these levels be it secondary, tertiary or university. Teachers often concentrate on imparting the incentive development aspect of biology in other words the theoretical aspect has been taught to the students leaving out the educational aspects. This is so because the product of biology, this school will be employed by the government in the pass schools but as a result of global economic aspect where government cannot longer employ the products of this school. This father increase unemployment and poverty. for instance, in Borno state since the inception of the present administration, the embargo placed on employment is still on going and subsequently graduates in various field of studies is on increase yearly. Therefore, it is against the background that the study entices to identify biological skills needed to be acquired by the students and the label of their awareness to enable them become gainfully self-employed on leaving school.

### **Aims and objectives of the study are as follows:**

1. To examine entrepreneurship opportunities available in biology education to combat economic recession.
2. Determine the level of pre- service-/teachers' awareness of the availability of entrepreneurship skills in Biology.
3. To determine the interest of pre-service Teacher in acquiring the entrepreneur's skills for self-employment.

### **Research questions**

What are the bio entrepreneurship skills available to biology students to aid ameliorate economic recession?

What is the level of awareness of biology student's bio entrepreneurship opportunities?

What is the extent of biology student interest in acquiring of entrepreneur skills for bio-entrepreneurship venture?

### **Scope of the study**

The study on strategy for combating in Nigeria economic recession through the use of biology education entrepreneur skills in some selected Tertiary Institution in Borno state, Nigeria a The selected tertiary institution is: Umar Ibrahim El-kanemi College of Education Science and Technology (UIECEST) Bama, Sir Kashim Ibrahim College of Education Maiduguri (KICOE) and Waka College of Education Biu. (WACEB)

### **Significance of the study**

The study titled strategies for combating economic recession in Nigeria through the use of biology education entrepreneurship skills in Borno state tertiary institution the findings of the study useful to significance to teacher, students and provosts of college of education. Pre-Service Teachers would benefit by acquiring bio empowerment skills so that they can be self-employed. Teacher would benefit from the skills so that they would teach students to be self-reliant and gainfully employed be sustainable. Education Ministry would benefit from the findings by engaging teacher to focus on teaching biology for entrepreneur skills development as this would no doubt reduces graduates' unemployment and foster economic development in the country. The curriculum planner would benefit by redesigning the school curriculum to suit the current need of entrepreneurial education in the country as it provides avenue for reducing unemployment in the Nation.

### **Methodology**

The study adopted the survey design, the target population of the study comprised of all students offering biology in the 3(three) selected colleges of education. Namely, College of Wakabiu, Sir Kashim Ibrahim College of Education Maiduguri; and Umar Ibrahim El-kanemi College of Education, Science and Technology Bama. The population of the students offering biology for these colleges was 600. The grand population of 600 students across the three selected colleges of education was used as a sample for the study. In each of the selected college, fifty percent (50%) of the population was randomly selected. Therefore, a total number of 200 students each from the selected colleges were involved in the study and they were picked from the List of prospective NCE pre-teachers graduates' college numbers indicating their year of entry. Data was collected using questionnaire derived from four research questions of the study titled " Role of Bio entrepreneur skills opportunities in Biology education in eliminating the economic crisis in some selected tertiary institutions in Borno state the modify four rating state was used to score the items of the questionnaire. The ratings of the response were strongly agreed (SN)=4, Agree = 3, disagree and strongly disagree = S(DA) the questionnaire has two section, A and B. Section A is on personal data of the

respondents while section B sought information on the bio entrepreneur skills available in biology education in tertiary institutions of Borno state.

The face and content validation was done by expert in science education curriculum. Various corrections and suggestions made were used to modify the instruments.

The test - retest technique was used to gauge the clarity and the relevance of the research instruments. the instrument was tested in the college of education which was not part of the study, and then retested after a period of interval in the same college as pilot study. 50 responses were used as row data to obtain the correction coefficients between the corresponding data pilot for the law time.

The questionnaires were administered, and the instrument yielded a coefficient value of 0.85 The 50% of the targeted population in each of the selected college of education (100) were administered with the questionnaires. The data obtained, were analysed using descriptive statistics, frequencies and percentages.

### Results and Discussion

Research question one (1) What are skills necessary in order to obtain Bio- entrepreneurial ship

**Table 1:** Skills Necessary for Acquiring Bio-entrepreneurial shipin Biology Education

S/N	No of Items	Yes	%	No	%
1	Possess of higher education in the depth knowledge of Bio	150	75	50	25
2	Creative ability	156	78	44	22
3	Hard works	130	65	70	35
4	Leadership skills	110	55	90	45
5	Ability to share and communicate effectively	144	75	56	25
6	Improvisation	160	80	40	20
7	Utilisation of opportunities	126	63	74	37
8	Innovative	190	95	10	5
9	Accounting skills	177	88	23	12
10	Ability to proffer solution to problems	140	70	60	30
11	A good personally disposition	133	67	07	33
12	Foresight ability	170	85	30	15
13	Ability to formulate good decision	170	85	30	15

**Source:** Ministry of Higher Education

The table above shows that 150 respondents represents (75%) says yes of the item one of the question. i.e. students of biology must have depth knowledge of Biology. while only 25% responded negatively. Analysis of responses on the table to item two on leadership and

discipline skills. 50% of the respondents agreed with the research question while 90 represents 35% percent of the respondents reported disagreed. Similarly, on creativity, the analysis revealed that 156 (78%) agreed that creative skills are necessary for acquiring entrepreneurship, while only 44 (22%) reported No. The table also revealed that 130 (65%) reported Yes, while 70 (35%) reported No. On improvisation skills, 160 (80%) agreed while 40 (20%) of them disagreed that improvisation is necessary for acquiring bio- entrepreneur skills. On utilization of opportunities, analysis on the table shown that 126 (63%) reported Yes while 74 of the respondents (37%) disagreed. The table also revealed that 190 (95%) agreed that innovative skills is needed for acquiring bio-entrepreneurship. Accounting ability reported (88%) of positive responses while the negative responses was only (12%). On the ability to proffer solution to problems, 140 of the respondents (70 %) reported Yes while 60 (30%) of them disagreed with the question. Analysis on the table also revealed that 133 (67%) agreed that a good personality is necessary for acquiring bio-entrepreneur skills while 77 (23%) of them reported No. that on the ability to share opinion and communicate effectively. The table revealed that 75% of the respondents agreed that sharing and communication ability is necessary for bio entrepreneur skill acquisition where as 25% of them, reported No. Also on foresight ability, 170 (85%) respondents agreed that it is necessary while only 30 (15%) disagreed On item number (8) that planning and organisation ability is necessary.

The results in table also revealed that 85% of the respondents agreed on the ability to formulates good entrepreneur decision is necessary for acquisition of skills in biology as a course of study aware of the entrepreneur skills area.

**Table 2:** The level of Awareness of different Bio-entrepreneurships Opportunities in Biology Education

S/N	AREAS	Response	no	Total
1	Micro biology/ parasitology	20.1%	180.9%	100%
2	Medicinal biology	11.55%	189%	
3	Environmental biology/ ecological students	12.5	94%	
4	Bio geography	90.45%	175%	55%
5	Bio chemistry	15.75	110%	
6	Waste managed conversation	178.5%	92.5%	95%
7	Hydro biology	105%	91.5%	
8	Economic botany	105%	190.95%	95%
9	Food technology	157.5%	40%	
10	Biology	189%	185.92%	91%
11	Genetic engineering	105%	190%	90%

The table 2 above reveals that 90% of the respondents reported not aware of micro biology/ parasitology as entrepreneur skills areas in biology education where only 10% of the students are aware on the medicinal biology for entrepreneurs skills development, the table2 reveals that 94% of the respondents are aware while on 8% reported un aware on environmental biology and ecology areas of vital skills acquisition area in biology the results in the table results shows that 88% of the respondents agreed that they are aware where 12% of the respondents were unaware of the skills. This is certainly to the other findings in the study. The table also reveals that 90% of the respondents were unaware of bio geography skill, for entrepreneurship development while only 10% the respondents reported aware of biochemistry skills in body study for entrepreneur development. 93% of the respondents reported unaware. While only 7% of them agreed awareness on were the management entrepreneur skills potentials, 92% of the respondents reported unawareness while only 8% of them attested awareness. Similarly, hydrobiology/ aquatic biology, 95% of the respondents attested unawareness of the entrepreneur skills while only 5% of them reported that they are aware on economic botany. 77% of the respondents reported that they were unaware of availability of entrepreneur skills in the area where as 23% of them, agreed, awareness, similarly on food technology, areas for skill development. 80% of the respondents a great of unawareness while 20% of them shown awareness on Genetic engineering, 88% of the respondents showed unawareness of the knowledge area between entrepreneurship skills, whereas only 12% of them reported awareness.

Student offering Biology as a course of study in the college of education showed the entrepreneurship skills development in the subject areas.

**Research question3:** What is the extent of Biology pre-service teachers’ interest in acquiring entrepreneur skills?

**Table 3:** Analysis of responses on Pre-service teachers’ interest in the acquisition of Bio-entrepreneurships skills

	Yes	Percent	No	Percent	Total %
College A	88	93%.	12	7%	100
College B	90	95%	10	10%	100

The table 3 shows the majority of the students represents 93% reported that they have interest in acquiring the entrepreneur skills available in some of the cities in biology education, only four of them, represents 7% show level of interest. The also revealed that 95% of respondents indicated that they have interest in acquisition of Bio- entrepreneur skills, while, only 5% of

the respondents indicated no interest. Therefore, biology teacher should encourage student interest through instructional practice as strategy to reduce the problem of unemployment and economic crisis in Borno state, in particular and Nigeria as a whole.

### **Discussion of Findings**

The study assessed the role of bio entrepreneur skills in some of the areas in biology education in eliminating economic crisis in Bornostate; The study raised three research questions namely; what are the bio-entrepreneur skills available in biology education? what is the level of awareness of bio entrepreneur skills areas in biology? And what is the extent of pre service teachers' interest in acquiring the entrepreneur skills?

Therefore, the finding of the study based on research question one (1) on table (1) on type of entrepreneur skills available on biology education and whether these skills are necessary for the development of entrepreneurship in students, reveal that most of the respondents agreed for this study. That all the skills listed in table 1 are necessary for the development of entrepreneur skills in biology students as shown by higher percentage of response to each item of the research question based on skills. This finding is in line with that of Amama (2017) in a study that biology is a development of Nigeria. Utilisation of biological science education for empowerment. A global challenge records that biology is a powerful tool for economic, social, and political development of Nigeria. Hence there is need to build into the biology curriculum Bio entrepreneur skills necessary for bio entrepreneurship ventures.

From the above findings, evident that make biology teaching cash product will help alleviate the problem of economic crisis. The second findings revealed that the majority of the respondents attested that they have interest in acquiring bio entrepreneurial skills. This may not be unconnected with the fact because of economic recession, government at both state and federal and no longer employ our teaching graduates from educational system. Hence any skills that will enable students to be self-employed focus their attention, graduate, self-employment will no doubt reduce the burden of the economy of Nigeria. These findings collaborate with the findings of Anyanwu (2010), in study embowering youths for sustainable development. Ascension of entrepreneurship skills need of youths who view entrepreneurship as the ability to be creative utilising opportunities available for both self-sustenance and contributing to the needs of other.

This finding is also in line with the findings of Amama(2017) who sees entrepreneur skills acquisition as an improvement in both the labour and the business sector, since it is very important to develop positive interest in whatever field of endeavour one want to engage. The third findings indicate that 95% of the respondents reported unawareness of the entrepreneurship areas in biology education; the awareness level was recorded low in the stud. The implication is that if students were unaware of the areas in biology where students

can create job for himself, the level of poverty will increase. Therefore, teachers of biology will blend the contents and the instructional practising as a powerful strategy for eliminating current economic crisis.

### Conclusion

Based on the findings of the study, it was concluded that economic crisis in Borno state in particular and, Nigeria at large left all sectors in doom, especially the educational system where thousands of graduate were unemployed which may subsequent create other societal problems to this end. So therefore if the strategy of Bio entrepreneurship skills in biology education area are incorporated into biology curriculum and taught alongside with the cognitive aspect of the subject, it will no doubt boost production and accelerate economic development of Borno state, tertiary institution provides flat form where many unemployed graduates of biology becoming self-employed, thereby reducing the effect of the economic shrinkage in the country.

### Recommendations

Based on the findings of the study, the following recommendations were made:

1. Biology teachers at all levels should make teaching of biology cash productive.
2. Accusation of bio entrepreneur skills should be made compulsory and art of the curriculum. Government at all level should assist financial educational institution for the purpose of training the students, the bio entrepreneurship area in raising the subject of the study.
3. Government should encourage the students acquiring the bio entrepreneurship skills will take up development fund to enable them to set up their own business for self-reliant

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## AGRICULTURAL SECTOR AND ECONOMIC PERFORMANCE IN NIGERIA: A DISAGGREGATED ANALYSIS

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### Abstract

*This study investigates the impact as well as the direction of causality between agricultural sector and economic performance in Nigeria from 1981 to 2016 using Fully Modified Ordinary Least Squares (FMOLS) and Engle-Granger Causality tests respectively. The results of the analysis showed that all the variables are stationary at first difference and co-integrated. The FMOLS results revealed a positive and significant relationship between agricultural sub-sectors (crop, fishery, forest, and livestock) and economic performance in Nigeria. It is evident from the result of the causality test that a bi-directional causality exists between forest sub-sector and economic performance, uni-directional causality running from fishery sub-sector to economic performance and one-way causality flowing from economic performance to livestock sub-sector. The study recommends that Nigeria should focus on promoting agricultural sector, create an enabling environment and formulate policies that will motivate Nigerians to invest in agricultural sector.*

**Keywords:** *Agricultural Sector, Agricultural-Led Growth Hypothesis, Economic Performance, and Fully Modified Ordinary Squares*

### Introduction

The role of agriculture in the growth and development process of developing countries has become a subject of debate among development economists in recent time and this is attributable to the contradictory findings obtained by researchers in different part of the world (Awokuse, 2009). Obviously, theoretical and empirical literature on agriculture-growth nexus are broadly divided into two and these are the pro-Agriculture-Led Growth (ALG) hypothesis and anti-ALG hypothesis. The advocates of ALG hypothesis argued that agriculture is the bedrock of economic growth and development while the anti-ALG hypothesis on the other hand demonstrated that the role of agriculture in the growth and development process is overemphasized and, agricultural productivity is weakly if not negatively related to industrialization (Woldeyohannes, 2010).

The advocates of ALG hypothesis asserted that agriculture is a major antidote to the twin-problem of poverty and unemployment that have bedeviled developing countries. According to Johnston and Mellor (1961), agriculture contributes to economic growth and development in five different ways. First, agriculture creates surplus labor for firms in the manufacturing sector. Second, agriculture creates capital for manufacturing investment. Third, agricultural sector supplies food for domestic consumption. Fourth, agricultural activities lead to creation of market for industrial output and lastly exportation of agricultural products creates foreign exchange earnings for financing importation of intermediate and capital goods. Based on these four important contributions of the agricultural sector, the advocates of ALG hypothesis concluded that agricultural growth is a necessary condition for industrialization and that industrial growth without agricultural development will result to severe economic imbalance (Nurkse, 1953; Rostow, 1960 and Johnston and Mellor, 1961).

Contrariwise, the anti-ALG hypothesis argued that no strong relationship exists between agricultural sector and other sectors of the economy and, agricultural sector lacks the “innovative structure” required by it to bring about higher productivity and exportation (Awokuse, 2009). Furthermore, the advocates of anti-ALG hypothesis countered pro-ALG hypothesis’s claim that agriculture is an “engine of economic growth” by showing that some countries and regions such as Belgium, Netherlands, New England and South of the United State with iota level of agricultural output were able to industrialize earlier than countries and regions with higher agricultural output” (Woldeyohannes, 2010).

Empirically, there is no consensus among researchers regarding the relationship between agriculture sector and economic growth. While the empirical evidence by Olabanjiet. *al.* (2017), Michael (2017) and Sertogluet *al.*(2017) supported the ALG hypothesis, the findings by Syedet *al.*(2015), Dim and Ezenekwe(2013), and Oluwatoyese and Applanaidu(2013) contradicted ALG hypothesis. In addition, few of the existing literature that probed the direction of causality between agricultural sector and economic growth in Nigeria obtained contradictory results. For instance, Olabanjiet. *al.* (2017) and Afolabiet *al.*(2017) found evidence supporting neutrality effect<sup>40</sup> while Michael (2017) and Odetola and Etumnu(2013) submitted thatthere is a unidirectional causality running from agriculture to economic growth in Nigeria.

In spite of the uncertainties surrounding agricultural sector, there has been an increasing efforts channeled towards development of agricultural activities in Nigeria. Government, international agents such as World Bank, International Monetary Fund (IMF) among others have contributed immensely towards improving agricultural sector in recent time. For

instance, in 2017, World Bank injected 200 million dollars into agricultural sector in Nigeria with over 2 million dollar grant specifically set aside for examining and developing business environment in the livestock sub-sector. Obviously, these institutions believed that even though agriculture sector as a whole may not exert positive impact on economic performance, important sub-sectors (such as livestock, crop production among others) within the agricultural sector are likely to promote economic performance. Given this scenarios, a critical re-examination of the role of agricultural sector is sacrosanct.

This study therefore advanced the body of knowledge in the following ways. Firstly, the study re-examines the impact of agriculture sector on economic performance by disaggregating agricultural sector into crop, livestock, forest and fishery. This will help the government to identify sub-sector (s) of the agricultural sector that drives economic performance in Nigeria. Secondly, the study uses Fully Modified Ordinary Least Square (FMOLS) Method which provides optimal estimates of co-integration regression by eliminating the problems of endogeneity and serial correlation which are peculiar to estimates obtain from Static Ordinary Least Square (SOLS) method. Lastly, the study uses Engle-Granger causality test to re-examines the direction of causality between agricultural sector and economic performance in Nigeria. The study measured economic performance by real gross domestic per capita which better reflects the changes in the relative economic status of individuals in the country.

The rest of the paper is arranged as follows: Section 2 presents the performance of the agricultural sector, theoretical review, empirical review and research gaps. Section 3 comprises theoretical framework, model specification, techniques of analysis, types and sources of data. Empirical results are presented and discussed in Section 4 while Section 5 contains conclusion and recommendations.

## **Literature Review**

### **Evaluation of Agricultural Sector's Performance in Nigeria**

In the early 70s, the share of agriculture in Gross Domestic Product (GDP) across the continent stands at about 40 percent and it declined to less than 25 percent in 2015, in Africa, it averages 21 percent and stood at 25 percent in Sub-Saharan Africa (African Transformation Report-ATR, 2017). No doubt, agricultural sector has contributed tremendously to Nigerian economy. In the 60s and early 70s, the share of agriculture exports was over 65 percent of Nigerian total exportation, in fact, Nigeria was the world's largest exporter of groundnut, the second largest exporter of cocoa and palm oil and a major exporter of rubber and cotton during the period (Odetola and Etumnu, 2013, and Sertogluet *al*, 2017). Unfortunately, the oil boom of 70s led Nigeria government to neglect the sector. However, the government of federal republic of Nigeria recently turned a new leave and began to see agriculture sector as the only means to address the development challenges (such as high rate of unemployment and poverty) facing the country.

Figure 1 shows the trend of agriculture annual growth in Nigeria. In 1984, the growth rate of agricultural sector in Nigeria declined and stands at a minimum value of 5.24 percent, it recovered in 1985 and it was stable until year 2002 when it skyrocketed and reached an all-time maximum value of 55.18 percent. The miraculous growth witnessed in 2002 is attributable to the improvement in the government’s effort channeled toward the agricultural sector. In 2016, agriculture growth stands at 4.11 percent. In terms of employment generation, agricultural sector has contributed greatly to employment generation in Nigeria, employing about two-thirds of Nigeria’s labour force (Odetola and Etumnu, 2013).

**Figure 1:** Agriculture (Annual % growth) from 1982 to 2016

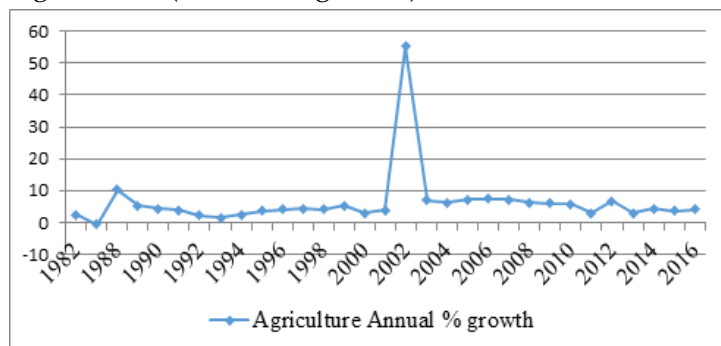
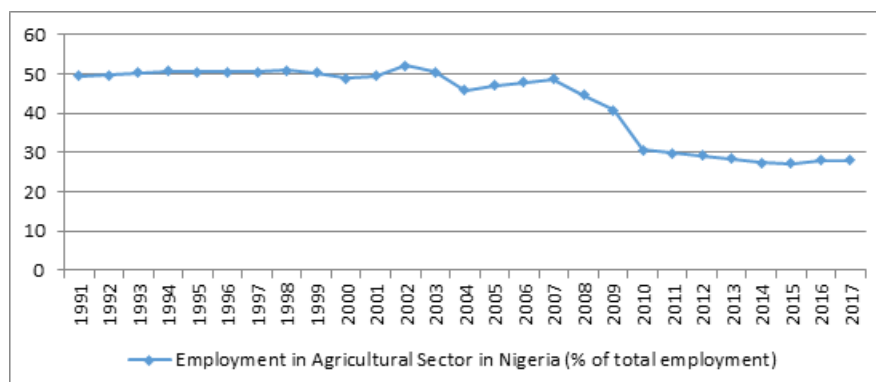


Figure 2 presents the trend of employment in agricultural sector as a percentage of total employment in Nigeria from 1991 to 2017. In the 90s to early 2000s, employment in agricultural sector was over 40 percent and it dropped to 30 percent in 2010. Ever since then, employment in agricultural sector fluctuates around 27 percent. These fluctuations can be attributed to the response of Nigerians to various agricultural policies in Nigeria.

**Figure 2:** Employment in Agricultural Sector in Nigeria (% of Total Employment) from 1991 to 2017



Furthermore, the Nigerian government in an attempt to boost the contribution of agriculture sector to economic development formulated various agricultural policies which include National Accelerated Food Production Programme (1972), Operation Feed the Nation (1976) and Green Revolution Programme (1980). Other Agency-Based Intervention Programmes that were targeted at promoting agricultural sector in Nigeria include National Agricultural Land Development Authority (NALDA), River Basin Development Authority (RBDA), Agricultural Development Programmes (1972) and Directorate of Food, Road and Rural Infrastructure (1987) (Afolabiet *al.*, 2017).

In addition, the government of Nigeria in 2010 came up with Agricultural Transformation Agenda (ATA) after a long time of "benign neglect" and the policy was implemented in 2011. The policy majorly focuses on resuscitating the agricultural sector and refocusing Nigerians' attention on agricultural activities. Additionally, Federal government of Nigeria introduces Agricultural Promotion Policy (APP) in 2016 to strengthen agricultural sector. Specifically, the policy aims at boosting agriculture foreign exchange earnings and tackles the problem of risen food importation in Nigeria (Federal Ministry of Agricultural and Rural Development, 2016).

### **Theoretical Review**

Since 18th century, the role of agriculture has remained a major discourse among development economists. A group of believers in ALG popularly known as the physiocrats argued that agriculture plays crucial role in the development process of any economy. The physiocrats described agriculture as the only real source of wealth and the only sector that has the capacity to produce surplus over replacement costs. By this, they meant that the fate of any economy is mainly determined by the level of agriculture productivity (Screpanti and Zamagni, 2005).

In Lewis theory of development, it was assumed that underdeveloped economies consist of two sectors, the traditional agricultural sector characterized by surplus labour and zero marginal labour productivity and the modern industrial sector which benefited from the agricultural sector's surplus labour. Moreover, Todaro and Smith (2012) emphasized that if development must to take place and become self-sustaining, it must include the rural area in general and the agricultural sector in particular. Furthermore, in Rostow's stages of growth, the transition from underdevelopment to development was described in terms of a series of stages. These stages are traditional stage, the precondition for take-off, the take off stage, drive to maturity and the high mass consumption stage (Todaro and Smith, 2012).

Olajideet *al* (2012) who provided further explanation of the theory argued that "agricultural sector has the potential to be the industrial and economic springboard from which a country's development can take off". He further explains that for agriculture to provide the needed support for economic growth and development, governments must devise methods to

alleviate poverty, promote rural transformation, income redistributions and socio-economic development. The anti-ALG hypothesis on the other hands argued that the role of agriculture in the growth and development process is overemphasized and that agricultural productivity is weakly if not negatively related to industrialization, and thus, slows down economic growth (Awokuse, 2009 and Woldeyohannes, 2010).

The Solow-Swan model also explains the relationship between the agricultural sector and economic growth. The Solow-Swan model incorporated labour and technology into the production function and shown that the inputs (labour, capital and technology) play a very important role in explaining the dimension of growth overtime and also the disparities in income across countries. Taking cognizance of the classic assumption of constant saving rate of the modern growth theory, Solow-Swan generates a very simple general equilibrium model of the form:

$$Y(t) = f\{K(t), L(t), T(t)\} \dots\dots\dots 1$$

where Y (t) denotes output produced at time t, K represents capital that is durable physical input such as machines, buildings and so on, L denotes input associated with human body such as physical strength, skills, health among others and T is the level of technology or knowledge.

The Solow-Swan model has four major attributes namely, constant return to scale, positive and diminishing returns to private inputs, marginal product of capital (or labour) approaches infinity as capital (or labour) goes to zero and approaches zero as capital (or labour) goes to infinity and lastly, plausible input-output relationship. The model has been modified by many researchers to investigate the impact of Agricultural sector on economic growth. Among them is Awokuse (2009) who examined the relationship between agricultural productivity and economic growth in 46 developing Countries.

**Empirical Review**

Empirical findings on agriculture sector-economic growth nexus are inconclusive. Olabanjiet. al. (2017) used time series data to examine the impact of agricultural output on economic in Nigeria from 1981 to 2014. Using Johansen maximum likelihood co-integration approach and Vector error correction models, their findings confirm long run relationship between agricultural output and economic growth in Nigeria though the result of Granger causality test suggested that there is no directional causality between agricultural output and real economic growth.

Michael (2017) probes the relationship between agricultural output and economic growth in Nigeria from 1980 to 2014 using Co-integration test, Vector Error Correction Model (VECM)

and Pairwise Granger Causality test. His empirical evidence suggests that agricultural sector is co-integrated with economic growth in the long run. Furthermore, Michael (2017) submits that agriculture is the engine of economic growth and development. Similarly, Sertogluet *al* (2017) employed Vector Error Correction Model (VECM) to inspect the impact of agricultural sector on the economic growth of Nigeria from 1981 to 2013. Their findings reveal that agricultural output and oil rents have long-run equilibrium relationship with economic growth in Nigeria.

Afolabiet. *al.* (2017) adopted VECM to investigate the impact of agriculture output on economic growth in Nigeria using time series data spanning from 1981 to 2014. Their empirical evidence suggest that agriculture output is negatively related to economic growth in the short run and positively related to economic growth in the long run. Furthermore, the result of their Granger causality test corroborates Olabanjiet. *al.* (2017) who submitted that there is no directional causality between agricultural sector and economic growth in Nigeria. Kehinde and Oladipo (2017) employed Ordinary Least Square technique and Exponential Generalized Autoregressive Conditional Heteroscedasticity to analyze the impact of agriculture output volatility on economic growth in Nigeria from 1970 to 2013. The result of the study reveals that agriculture output and labour force have positive impact on economic growth while agriculture output volatility has negative impact on economic growth in Nigeria.

Syedet *al* (2015) analyzed the impact of agricultural exports on the macroeconomic performance of Pakistan over the period of 1972 to 2008. The study submits that there is a negative relationship between agricultural export and economic growth while nonagricultural export was found to have positive relationship with economic growth. Oyakhilomen and Zibah(2014)inspected the relationship between agricultural production and economic growth in Nigeria from 1970 to 2011 using Autoregressive Distributive Lag bounds test approach. Their result confirmed that agricultural production is positively and significantly influence economic growth in Nigeria both in the short and long run. This finding is consistent with the empirical evidence reported by Michael (2017) and Sertogluet *al* (2017).

Dim and Ezenekwe (2013) used Ordinary Least Squares to explore the impact of agriculture on economic development in Nigeria from 1970 to 2010. Dim and Ezenekwe(2013) contradicted Syedet *al* (2015), Michael (2017) and Sertogluet *al* (2017) by showing that agricultural output has negative impact on economic development in Nigeria. Odetola and Etumnu (2013) probed the contribution of agriculture sector to economic growth in Nigeria from 1960 to 2011 using the Growth Accounting Framework. The study finds that agriculture sector contributes positively and consistently to economic growth in Nigeria. The result of their Pairwise Granger causality test support a one-way causality running from agricultural



sector to economic growth in Nigeria. Oluwatoyese and Applanaidu (2013) used Ordinary Least Square (OLS) method to explore the role of agricultural, manufacturing and services sectors performance in Nigeria from 1980 to 2011. Oluwatoyese and Applanaidu (2013) corroborated Dim and Ezenekwe (2013) by showing that agriculture has negative impact on economic growth.

### Research Gaps

Though several studies have investigated the relationship between agricultural sector and economic growth, the empirical findings to date have been contradictory. While empirical evidence reported by Olabanji *et. al.* (2017), Michael (2017), Sertoglu *et. al.* (2017), Oyakhilomen and Zibah (2014) and Odetola and Etumnu (2013) supported ALG hypothesis, findings submitted by Syed *et. al.* (2015), Dim and Ezenekwe (2013) and Oluwatoyese and Applanaidu (2013) contradicted the hypothesis. Few other studies<sup>41</sup> reported mixed results. It is obvious from the literature reviewed that that none of the existing studies disaggregated agricultural sector into sub-sectors such as crop, livestock, forestry and fishery. In addition, none of the known existing studies known to the author employ Fully Modified Ordinary Square (FMOLS) method to probe the relationship between agricultural sector and economic performance in Nigeria. Hence, this study is set out to fill these gaps.

### Methodology and Data Issues

#### Model Specification

This study adopts Awokuse (2009) version of Extended Solow-Swan framework to investigate the role of agriculture in Nigerian economy. The Cobb-Douglas version of the extended Solow-Swan model is stated below:

$$Y_t = K_t^\alpha L_t^\beta B_t \dots\dots\dots 2$$

where real GDP per capita (Y), K is capital proxy by gross capital formation per worker, L is labour proxy by population and B is assumed to be a function of the other explanatory variable in his model.

Moreover, the study augments Awokuse (2009) model in order to capture important variables peculiar to Nigerian economy and achieve the core objectives of the study. B in equation 2 is assumed to be a function of crop output, livestock output, forestry output and fishery output. This is expressed in equation form as follows:

$$Y_t = K_t^\alpha L_t^\beta CO_t^\phi LO_t^\delta FO_t^\rho FR_t^\lambda X_t^\psi \dots\dots\dots 3$$

Taking natural logs of equation (3) the econometrics form becomes:

$$\ln Y_t = \alpha + \alpha \ln K_t + \beta \ln L_t + \phi \ln CO_t + \delta \ln LO_t + \varphi \ln FO_t + \gamma \ln FR_t + \psi \ln X_t + \mu_t \dots \dots \dots 4$$

Where Y is Real Gross Domestic Product per capita (measure for Economic Performance), K is Gross Fixed Capital Formation (measure for Capital), L is Labour (proxy by population), CO is crop sector output, LO is livestock sector output, FO is forestry sector output, FR is fishery sector output and X is Export of goods and services.

ln is natural log,  $\mu$  is error term,  $\alpha$  is intercept  $\alpha$ ,  $\beta$ ,  $\phi$ ,  $\delta$ ,  $\varphi$ ,  $\gamma$  and  $\psi$  are the elasticity of capital, labour, crop output, livestock output, forestry output, fishery output and export of goods and services with respect to real GDP respectively and they are expected to have direct relationship with real GDP.

**Techniques of Analysis**

This study employs descriptive statistic to examine the characteristics of the dependent and independent variables. After then, the study uses Augmented Dickey Fuller (ADF) unit root test developed by Dickey and Fuller (1979), Phillips-Perron (PP) unit root test developed by Phillips and Perron (1988) and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) unit root test developed by Kwiatkowski *et al.* (1992) to investigate the stationarity properties of all the variables at level and first difference with intercept. The choice of three different unit root tests is underpinned by the need for robust model since the stationarity status of the variables is a prerequisite for estimation of co-integration and long run impact of the independent variables.

Having established that the variables are stationary after first difference, the study probes the long run relationship among the variables by using two robust co-integration tests which are Engle-Granger (1987) residual based test and Hansen’s instability test developed by Hansen (1992). Engle-Granger co-integration is obtained by testing the stationarity property of the residual obtained from SOLS under the null hypothesis of no co-integration against the alternative hypothesis of co-integration. Engle-Granger residual based test equation for a P-lag augmented regression is as follows:

$$\Delta \hat{u}_{1t} = (p-1)\hat{u}_{1t-1} + \sum_{j=1}^p \delta_j \Delta \hat{u}_{1t-1} + v_t \dots \dots \dots 5$$

To obtain the co-integration statistic, Engle and Granger considered two standard ADF test statistics. The first statistic relied on t-statistic for testing the null hypothesis of non-stationarity while the second statistic was based on the normalized autocorrelation coefficient. The number of lagged differences (p) in equation 3 is expected to increase to infinity at the rate slower than  $T^{1/3}$  in a sample size of T. Engle and Granger (1987) concluded that the null

hypothesis of no co-integration can be rejected if the residual obtained from the SOLS is stationary.

Hansen (1992) on the hand developed a co-integration test that relies on estimates from single equation vectors to examine the existence of long run relationship among the regressors. Hansen's instability technique tests the null hypothesis of co-integration against the alternative hypothesis of no co-integration and Hansen (1992) demonstrated that under such conditions, parameter instability cannot be avoided. He therefore proposed the use of Lagrange Multiplier  $L_0$  test statistic for testing for parameters stability. The  $L_0$  statistic was used to investigate the time-variation in the scores from estimated equation and the test equation is given as:

$$L_0 = tr\left(\sum_{t=2}^T \hat{S}_t' G^{-1} \hat{S}_t\right) \dots\dots\dots 6$$

where  $G$  is taken to be a measure of parameter instability and it is expressed as follow for a FMOLS model:

$$G = \hat{\omega}_{1,2} \left( \sum_{t=2}^T Z_t Z_t' \right) \dots\dots\dots 7$$

$S_t'$  on the other hand is assumed to be the sum of the vector of estimated individual score contributions and it can be express geometrically as follows:

$$S_t' = \sum_{r=2}^t \hat{s}_r \dots\dots\dots 8$$

For a Fully Modified Ordinary Least Squares (FMOLS) model,  $\hat{s}_t$  in equation 8 becomes:

$$\hat{s}_t = (Z_t \hat{u}_t^+) - \begin{bmatrix} \hat{\lambda}_{12}^+ \\ 0 \end{bmatrix} \dots\dots\dots 9$$

It should be noted that  $L_0$  is non-standard and it depends  $m_2$  which is the number of covariates that are co-integrated less the number of covariates with deterministic trend excluded from the co-integrating equation. This can be expressed as:

$$m_2 = \max(n - p_2, 0) \dots\dots\dots 10$$

where  $n$  is the number of stochastic covariates and  $p_2$  is the number of number of covariates with deterministic trend excluded from the co-integrating equation. In order to compute the p-values of  $m_2$  and  $p$ , Hansen (1992) provided tabulated simulation results and polynomial functions and proposed that the null hypothesis of co-integration should not be rejected if the P-value is at the conventional levels.

Furthermore, to establish the long run effect of disaggregated agricultural sector on economic performance, the study employs FMOLS single co-integrating vector developed by Phillips and Hansen (1992). The estimator of FMOLS has fully efficient mixture normal asymptotics that is unbiased and it is superior to SOLS in that it deals with the problem that arises from the long run correlation between co-integrating equation and random element of the covariates innovations (Phillips and Hansen, 1992).

The basic estimator of FMOLS is expressed as follows:

$$\varpi_{FMOLS} = \begin{bmatrix} \hat{\beta} \\ \hat{\gamma}_1 \end{bmatrix} = \left( \sum_{t=2}^T Z_t Z_t' \right)^{-1} \left( \sum_{t=2}^T Z_t y_t^+ - T \begin{bmatrix} \hat{\lambda}_t^+ \\ 0 \end{bmatrix} \right) \dots\dots\dots 11$$

where  $Z_t = (X_t', D_t)'$ ,  $y_t^+ = y_t - \hat{\omega}_{12} \hat{\Omega}_{22}^{-1} \hat{\mu}_2$  and  $\lambda_{12}^+ = \hat{\lambda}_{12} - \hat{\omega}_{12} \hat{\Omega}_{22}^{-1} \hat{\Lambda}_{22}$ . Furthermore,  $\hat{\mu}_t$  are residuals used to compute long-run covariance matrices  $\hat{\Lambda}$  and  $\hat{\Omega}$  while  $\hat{\omega}$  is the scalar estimator. Additionally, this study employs Pairwise Granger Causality test to investigate the direction of causality among the variables.

**Types and Source of Data**

The study obtained secondary data on Real Gross Domestic Product per capita (measure for Economic Performance), Gross Fixed Capital Formation (measure for Capital), Labour (proxy by population), Crop Sector, Livestock Sector, Forestry Sector, Fishery sector and Export of goods and services over the period of 1981 to 2016. The data were sourced from the National Bureau of Statistic annual reports, 2016 Central Bank Statistical Bulletin and World Bank Development Database.

**Empirical Results**

*Descriptive Statistic*

Summary statistics of all the variables used in the study are presented in Table 1 in the Appendix. The values of the skewness is positive for all the variables which is an indication that the variables have long right tail while the value of kurtosis indicated that all the variables are Platokurtic (i.e. less than 3) except the log of export that is leptokurtic (i.e greater than 3). Finally, the probability values of JargueBera statistic of all the variables are greater than the conventional levels which suggest that all the variables are normally distributed.

*Unit Root Results*

The results of ADF, KPSS and PP presented in Table 1 shows that the time series variables are all stationary after first difference that is I (1). A series is said to be integrated of order one if the test statistic is greater than any of the critical values or the P-values is at the conventional levels.



**Table 1:** Result of ADF, PP and KPSS

Variables	ADF		PP		KPSS		Order of Integration
	Level	First Difference	Level	First Difference	Level	First Difference	
LogY	-2.308306	-4.643706*	-2.291775	-4.600130*	0.196987	0.133663*	I(1)
LogK	0.291145	-4.735477*	0.235583	-4.735477**	0.687786	0.170291*	I(1)
LogL	-	-4.735477*	1.568084	-1.351788	0.716218	0.284858*	I(1)
logX	0.817360	-3.102812**	1.050775	-1.651459	0.721205	0.241369*	I(1)
LogCO	0.048674	-5.745058*	0.054448	-5.744673*	0.692801	0.112537*	I(1)
LogLO	0.996413	-4.110940*	0.856816	-4.130204*	0.691807	0.252535*	I(1)
LogFO	0.338303	-8.912461*	-0.051014	-4.212807*	0.648210	0.197602*	I(1)

(\* and \*\* denote 1% and 5% significance level respectively)

### Co-integration Result

Since Engle-Granger co-integration test rely on SOLS residual, the study estimates SOLS and then tests the stationarity property of the residual. The result presented in Table 2 shows that the residual is stationary at level which suggest that the variables are co-integrated. This finding was validated by Hansen's instability test which suggests the existence of long run relationship among the variables.

**Table 2:** Engle-Granger Residual Based and Hansen's Instability Test Results

Engle-Granger Residual Based Test		Hansen's Instability Test	
ADF t-Statistic	Probability Value	Lc Statistic	Probability Value
-4.897905	0.0020	1.518448	0.01*

\*significant at 1% level

### Long-run Impact of Agriculture Sub-sectors on Economic Performance in Nigeria

To eliminate the problems of endogeneity and serial correlation which are peculiar to estimates obtain from SOLS method, the study uses FMOLS and since all the variables are transformed to natural logarithm, the parameters of the long run co-integration vector were taken to be long run elasticities. The long run elasticity of the covariates with respect to economic performance presented in Table 3 suggests that capital (LOGK) has a positive and significant impact on economic performance in Nigeria such that a 1 percent increase in capital

lead to about 0.08 percent improvement in economic performance. Labour (LOGL) on the other hand has a significant and negative relationship with economic performance; a 1 percent increase in labour reduces economic performance by 2.13 percent.

**Table 3: Long-run Estimate**  
**Dependent Variable: LOGY**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	37.56241	5.572968	6.740108	0.0000*
LOGK	0.077595	0.026857	2.889222	0.0075*
LOGL	-2.133263	0.331240	-6.440244	0.0000*
LOGCO	0.274020	0.076824	3.566865	0.0014*
LOGLO	0.683646	0.245514	2.784546	0.0097*
LOGFO	0.336821	0.148220	2.272439	0.0312**
LOGFR	0.168900	0.041841	4.036671	0.0004*
LOGX	-0.004070	0.009125	-0.446078	0.6591
R-square: 0.950395		Adjusted R-square: 0.937535		

(\* and \*\* denote 1% and 5% significance levels respectively)

Moreover, the sign born by the coefficient of crop sub-sector (LOGCO), livestock sub-sector (LOGLO), Fishery sub-sector (LOGFR) and forest sub-sector (LOGFO) conforms to a priori expectation and significantly related to economic performance in Nigeria. This implies that a 1% increase in crop sub-sector, livestock sub-sector, forestsub-sector and fisherysub-sector lead to 0.27 percent, 0.68 percent, 0.34 percent and 0.17 percent in economic performance in Nigeria respectively. These results give credence to the findings of Oyakhilomen and Zibah (2014), Olabanjiet. al. (2017), Michael (2017) and Sertogluet. al. (2017) who reported that agricultural sector contributes to economic growth in Nigeria. In addition, the results also revealed that crop and livestock sub-sectors contribute more to economic performance in Nigeria. This impressive performance of agricultural sector can be attributed to a number of policies such as industrial crop production policy, agricultural credit policy, rural infrastructure policy and development of live stock business environment pursued by Nigerian Government (Federal Ministry of Agricultural and Rural Development, 2016).

Furthermore, exports (LOGX) have negative and insignificant impact on economic performance in Nigeria. This result contradicts a priori expectation and the reason may be attributed to the failure of Nigeria government to make adequate use of export earnings. Adjusted R-squared suggests that the covariates explained about 94 per cent of total variation

in economic performance of Nigeria. The implication of this is that the model is of good fit. Finally, the probability values of covariates suggest that the overall model is highly significant.

**Eangle-Granger Causality Test Result**

The result of the Pairwise Granger causality presented in Table 4 suggests the presence of unidirectional causality between economic performance and crop sub-sector (LOGCO) in Nigeria with causality running from crop sub-sector to economic performance in case one. There is evidence of abi-directional causality between forest sub-sector (LOGFO) and economic performance, unidirectional causality running from fishery sub-sector (LOGFR) to economic performance and one-way causality flowing from economic performance to livestock sub-sector (LOGLO).

**Table 4:** Pairwise Granger Causality Test Result Showing Direction of Causality between Agricultural Sub-sectors and Economic Performance in Nigeria.

Case	Null Hypothesis	F-stats	Prob.	Decision
1	LogY does not Granger Causes LogCO LogCO does not Granger Causes LogY	0.812807.95557	0.4535 0.0018*	Accept Reject
2	LogY does not Granger Causes LogFO LogFO does not Granger Causes LogY	5.23685 3.28355	0.0114** 0.0518***	Reject Reject
3	LogY does not Granger Causes LogFR LogFR does not Granger Causes LogY	1.20203 4.47526	0.3151 0.0202**	Accept Reject
4	LogY does not Granger Causes LogLO LogLO does not Granger Causes LogY	0.27995 4.80825	0.0620*** 0.7578	Reject Accept

\*, \*\* and \*\*\* denote rejection of null hypothesis at 1%, 5% and 10% level of significant.

**Conclusion and Recommendations**

The study examines the long run impact of agricultural sector on economic performance in Nigeria from 1981 to 2016 using disaggregated agricultural sector data. ADF, PP and KPSS unit root tests were used to investigate the stationarity properties of all the variables and Engle-Granger residual based co-integration and Hansen’s instability test were used to establish the long run relationship between agricultural sector and economic performance in Nigeria. Having established that the variables are co-integrated, the study uses FMOLS to determine the long run impact of agricultural sector on economic performance and then obtained the direction of causality with Engle-Granger Causality test.

The study finds that all the agricultural sub sectors (crop, fishery, forest, and livestock) have significant and positive impact on economic performance in Nigeria. However, crop and livestock sub-sectors contribute more to economic performance. The result of Engle-Granger causality shows the existence of unidirectional causality running from crop sub-sector to economic performance in Nigeria, bi-



directional causality between forest sub-sector and economic performance, unidirectional causality running from fishery sub-sector to economic performance and one-way causality flowing from economic performance to livestock sub-sector.

The study therefore recommends that Federal Government of Nigeria should promote the agricultural sector, create an enabling environment and formulate policies such as integrated rural development policy among others that will motivate Nigerians to invest in agricultural sector particularly crops, forestry and livestock sub-sectors.

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## EVALUATION OF LECTURERS' PROFICIENCY IN THE USE OF ELECTRONIC AIDS FOR INSTRUCTIONAL DELIVERY IN BUSINESS EDUCATION

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### Abstract

The study evaluated lecturers' proficiency in the use of electronic aids in the instructional delivery in business education in South-South, Nigeria. Two research questions and two hypotheses guided the study. The study adopted descriptive survey research design. The population of the study consisted of all 247 business education lecturers of both federal and state owned colleges of education in the region. A checklist was used to obtain data from the respondents. The observational checklist was titled: Checklist Business Education Lecturers Proficiency in visual aid for Instruction (CBELPVAI). The checklist was validated by three experts representing one each in business education, science education and computer education departments. Mean and standard deviation were used to answer the research questions while t-test was used to test the hypotheses at 0.05 level of significance. The study revealed that lecturers in business education in colleges of education in the sampled area have low proficiency in the use of Power Point, whereas they are proficient in the use of Microsoft excel for instructional delivery. It was recommended among others that business education lecturers should ensure that their students are taught the rudiments of e-visual skills to enhance their self-reliance capacity. Business education students should be sensitized that their intellectual capacity rather than their institution ownership is the catalyst for stimulating their performance or excellence in the world of work. Institution owners should encourage new discovery with high potentials for lecturers in business education and also ensure that the programme is fully funded.

**Keywords:** Proficiency, Electronic and Business Education

### Introduction

Business education is that aspect of the total educational programme that provides knowledge, skills, understanding and attitudes needed to perform effectively in the business

world as it provides consumer goods and services that businesses offer (Okoli,2010). Ekoh (2015) affirmed that business education is education for self- reliance, self-independence, self-sufficiency, a programme that prepares individuals with relevant and indispensable skills to survive in any terrain irrespective of the economic situation. Ozoemena (2013) posited that it is a planned programme of course and learning experiences that begin with the discovery of career options, supports basic academic and life skills, and enables the achievement of high academic standards, leadership, preparation for industry and continuing education.

In view of the above projections therefore, for the business education lecturers' in colleges of education to maintain high standard in knowledge dissemination and preparation of their students to fit into the world of work upon graduation, they must embrace the technicalities and be proficient in the use of visual aid like power point and Microsoft excel in instructional delivery.

Power point is highly relevant in the society today and is an incredible instrument for instilling inclination for improved adequacy in educating and learning. Capability in power point introduction ensures simple business, productive and successful occupation execution. The appearance of mixed media projectors through ICT gadgets has activated new approaches in instructing and learning of Business Education, in this manner making dying the old customary homeroom strategies. Yilji and Wakdat (2008) argued that the world is being driven by globalization, innovation and gadgets in that capacity the nearness of developments in PowerPoint introductions has made a glaring requirement for teachers to get more PowerPoint introduction abilities and so as to raise the bore of alumni that will fit decisively into the cutting edge testing work patterns (Okorie & Wagbara, 2016).

Mbaezue (2010) explained that the use of power point presentations has prompted improved instructing and learning in Business Education, just as students' interest. Nwosu and Mbaezue (2016) opined that PowerPoint capability upgrades the productivity and viability of instructing and learning by and large and business training specific. In a similar vein, Owobi (2008) noticed that ICT is one of the world's quickest developing ventures in perspective on the way that it can make open door for humankind to store, recover, process, disseminate, control, survey, update and investigate information freely. Azuka (2015) enthused that the most up to date innovation that enables people to attempt things in physical and virtual homerooms is the PowerPoint innovation. PowerPoint is one of the most up to date innovations or programming that enables instructors and mentors to show their exercises in graphical configuration to go with an oral introduction. It is normally utilized in Business instruction to make talk notes, oral introductions, speaker notes, and diagrams. PowerPoint can house a variety of data including diagrams, audio effects, video, content and outlines. Slope, Arford, Lubitow and Smollin (2012) portrayed that a decent number of instructors are progressively utilizing PowerPoint in their instructional conveyance.

Similarly, Hess (2005) contended that using spreadsheet based modeling for teaching business courses does not only provide a means of enhancing understanding and retention but it is also bound to improve employability of students as they become more adept in their use of analysis tools widely used in today's work environment.

Bradbard, Alvis and Morris (2014) identified Microsoft Excel to be more important than the other technology resources in the teaching and learning of accounting education. Specifically, Microsoft Excel features that make it so important are: cell formatting, print formatting, basic formulas, manage worksheets etc. Elrod, Pittman, Norris and Tiggeman (2015) noted that coverage of Microsoft excel in experiential learning was the most widely implemented mode of instruction. This is essential considering that Microsoft Excel is a practical tool and not a theoretical construct. It is necessary that accounting educator's attempts to meet the expectations of practitioners regarding new hires possessing Microsoft Excel skills.

Spraakman (2011) explained that one method of improving the Excel skills of students may be to incorporate active or experiential learning components into the classroom in order to reach a larger portion of students. Brewer, Sorensen and Stout (2014) pointed out that Microsoft Excel is useful across all functional areas: managerial, audit, tax and advisory. Additionally, educators teaching managerial/cost accounting, auditing or tax can also prioritize their planning efforts for other technology applications based on the practitioner importance ratings in each employment category to better align the curriculum to the demands of that particular consistency (Gray & Todaro,2016)..

### **Statement of the problem**

Business education which is a programme of study introduced in Nigeria's tertiary institution to curb the unemployment challenge and redirect the thought of the graduates towards job creation by instilling in them suitable skills that will positively impact on the economy. The goals and objectives of the programme are laudable. Despite the introduction of this lofty programme, the unemployment situations seem unabated this is because most graduates of Business Education still roam the street and major cities looking for white collar job. For instance, Robinson and Kennedy (2014) observed that the unemployment rate in our country as 2011 has risen up to 23.9 percent This could be adduced to the fact that majority of the job seekers could be graduates that never acquire the right skills or may have been taught by lecturers that are not proficient in the use of electronics teaching aids.

Many scholars have spoken about the disconnection between this and the current reality. Adekunle (2012) observed that there is inadequacy in the Business Education program because of failure to coordinate ICT in its instructional conveyance. This was upheld by Iwu

(2016) who set that Business Education educational plan is shy of gathering the desires in workplace as ICT is not incorporated in its teaching and learning.

Arguably, most lecturers who are charged with the responsibilities to teach business education in colleges of education may not be proficient or may not have acquired the proficiencies needed in the use of visual aid in instructional delivery or do not understand the general coordination and applications of e-systems in teaching and if this situation continues unabated, it will leave no doubt to question the significance of business education in our educational setting. Herein lies the credence to evaluate business education lecturers proficiencies in the use of e-visual aid in instructional delivery in business education.

### **Research Questions**

1. To what extent does a business education lecturer in college of education proficient in the use of PowerPoint to enhance instructional delivery?
2. To what extent does a business education lecturer in college of education proficient in the use of Microsoft Excel to enhance instructional delivery?

### **Hypotheses**

1. There is no significant difference in the mean rating of business education lecturers' proficiency in the use of PowerPoint for instructional delivery based on ownership.
2. There is no significant difference in the mean rating of business education lecturers' proficiency in the use of PowerPoint for instructional delivery based on ownership.

### **Method**

This study adopted the descriptive survey research design. An observation checklist titled: Observational Checklist Business Education Lecturers Proficiency in the Use of visual aid for Instruction (**CBELPVAI**) was used to obtain data from the respondents. The population of the study comprised of all the 247 Business Education lecturers in colleges of education in South-South, Nigeria was used for the study. A census sampling technique was used to select the entire sample of 247 Business Education lecturers in Colleges of Education. Mean and standard deviation were used to answer the research questions, whereas Analysis of variance ANOVA was used the test the hypotheses at 0.05 level of significance.

Copies of the observational checklist were given to one expert in Computer Science department, one business educator for face and content validity.

## Results

**Table 1:** Mean and standard deviation of how business educations in college of education lecturers are proficient in the use of PowerPoint to enhance their instructional delivery

S/N	Item	VP	P	LP	NP	$\bar{X}$	SD	Interpretation
1	Opening a PowerPoint environment	21	38	68	120	1.83	0.97	LP
2	Creating slides using different layout	24	53	76	94	2.02	0.98	P
3	Adding titles and subtitles to a slide	19	33	82	113	1.82	0.92	LP
4	Changing font and sizes of text in a slide	21	36	79	111	1.86	0.95	LP
5	Setting up presentation	38	47	64	98	2.10	1.09	P
6	Creating and selecting objects in a presentation	23	34	68	122	1.83	0.98	LP
7	Moving and resizing objects	18	31	66	132	1.74	0.93	LP
8	Changing object attributes in a presentation	26	35	75	117	1.82	0.95	LP
9	Formatting and editing presentation using a template	16	32	84	115	1.79	0.90	LP
10	Inserting images in a presentation	18	28	93	108	1.82	0.91	LP
11	Adding sounds to a presentation	11	23	118	95	1.79	0.89	LP
12	Customizing animations in a presentation	13	24	98	112	1.74	0.81	LP
13	Running a slide show	15	22	108	102	1.79	0.83	LP
14	Remaining a slide show	17	25	96	109	1.79	0.76	LP
15	Printing out and storing a slide presentation	14	28	84	121	1.73	0.87	LP
16	Making a presentation using slides and projection	19	34	93	101	1.88	0.91	LP
<b>Grand Mean</b>		<b>19</b>	<b>33</b>	<b>85</b>	<b>110</b>	<b>1.84</b>	<b>0.92</b>	<b>LP</b>

Source: Research data, 2018

Data in Table 1 indicated that the mean value for items 2 and 5 fall within the region of proficiency, while items 1, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16 fall within the region of low proficiency. However, the grand mean of 1.84 fall within the region of low proficiency. Hence, lecturers in business education in colleges of education in the South-South, Nigeria observed in the study have low proficiencies in the use of Power Point for instructional delivery in business education. The standard deviation indicated the extent of consistency of

scores of lecturers in business education on their observed proficiency in the use of Power Point for instructional delivery in colleges of education in South-South, Nigeria.

**Table 2:** Mean and standard deviation on how Business Education in College of Education lecturers is proficient in the use of Microsoft Excel to enhance instructional delivery

S/N	Item	VP	P	LP	NP	$\bar{X}$	SD	Interpretation
1	Understands the structure of a spreadsheet	41	52	68	88	2.21	1.07	P
2	Enters data	52	60	61	74	2.36	1.11	P
3	Formats data in a cell	54	58	69	66	2.40	1.10	P
4	Generates appropriate graph	56	57	73	61	2.43	1.09	P
5	Edits data in an existing record	64	55	71	57	2.51	1.09	P
6	Adds/deletes record	67	64	59	57	2.57	1.11	P
7	Locates specific record(s) using find function	51	56	65	75	2.33	1.11	P
8	Opens and uses a commercial database	43	57	61	86	2.23	1.09	P
9	Chooses appropriate data types for fields	48	53	59	87	2.25	1.03	P
10	Undertakes basic calculations	38	48	63	98	2.10	1.09	
<b>Grand Mean</b>		<b>51</b>	<b>56</b>	<b>65</b>	<b>75</b>	<b>2.34</b>	<b>1.11</b>	<b>P</b>

**Source:** Research data, 2018

Data in Table 2 reveals that the mean values of item 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 fall within the region of proficiency. Also, the grand mean of 2.34 fall within the region of proficiency. Hence, lecturers in business education in colleges of education in South-South, Nigeria observed in the study are proficient in the use of Microsoft Excel in instructional delivery in business education. The standard deviation reveals the extent of consistency of scores of the lecturers in business education on their observed proficient in the use of Microsoft Excel for instructional delivery in colleges of education in South-South, Nigeria.



**Table 3:** t-test analysis of mean rating of business education Lecturers on their Proficiency in the use of Power Point in Instructional Delivery based on Ownership

S/N	Variable	N	$\bar{X}$	SD	Df	t-cal	t-crit	Decision	Remark
1	Federal	109	2.98	0.75	245	-1.78	1.96	Accept H <sub>0</sub>	Not Significant
	State	138	3.14	0.67					
2	Federal	109	2.92	0.85	245	-0.83	1.96	Accept H <sub>0</sub>	Not significant
	State	138	3.00	0.66					
3	Federal	109	2.75	0.84	245	-3.01	1.96	Reject H <sub>0</sub>	Significant
	State	138	3.05	0.71					
4	Federal	109	3.13	0.73	245	-1.04	1.96	Accept H <sub>0</sub>	Not significant
	State	138	3.23	0.68					
5	Federal	109	3.14	0.81	245	-0.92	1.96	Accept H <sub>0</sub>	Not significant
	State	138	3.23	0.64					
6	Federal	109	3.32	0.79	245	-1.25	1.96	Reject H <sub>0</sub>	Significant
	State	138	3.44	0.72					
7	Federal	109	3.36	0.82	245	0.12	1.96	Accept H <sub>0</sub>	Not significant
	State	138	3.35	0.73					
8	Federal	109	2.84	0.85	245	-3.67	1.96	Reject H <sub>0</sub>	Significant
	State	138	3.20	0.68					
9	Federal	109	3.09	0.82	245	-2.62	1.96	Reject H <sub>0</sub>	Significant
	State	138	3.34	0.71					
10	Federal	109	3.25	0.81	245	-0.74	1.96	Accept H <sub>0</sub>	Not Significant
	State	138	3.32	0.66					
11	Federal	109	3.25	0.81	245	-1.37	1.96	Accept H <sub>0</sub>	Not Significant
	State	138	3.39	0.80					
12	Federal	109	3.14	0.80	245	-0.78	1.96	Accept H <sub>0</sub>	Not Significant
	State	138	3.22	0.76					
13	Federal	109	2.93	0.82	245	-1.20	1.96	Accept H <sub>0</sub>	Not Significant
	State	138	3.06	0.85					
14	Federal	109	2.83	0.91	245	-2.15	1.96	Reject H <sub>0</sub>	Significant
	State	138	3.06	0.76					
15	Federal	109	2.92	0.95	245	-1.80	1.96	Accept H <sub>0</sub>	Not Significant
	State	138	3.11	0.69					
16	Federal	109	3.10	0.88	245	-0.36	1.96	Accept H <sub>0</sub>	Not Significant
	State	138	3.13	0.71					
<b>t-test Summary</b>	<b>Federal State</b>	<b>109 138</b>	<b>3.05 3.20</b>	<b>0.80 0.76</b>	<b>245</b>	<b>1.49</b>	<b>1.96</b>	<b>Accept H<sub>0</sub></b>	<b>Not significant</b>

**Source:** Research data, 2018

Data on Table 3 revealed the calculated t-values on mean rating of Lecturers on their proficiency in the use of Power Point for instructional delivery in Business Education in Colleges of Education in South-South, Nigeria based on their ownership. An observation of

the summary of the calculated t-value in Table 4 above shows that the calculated t-value (1.49) is less than the critical t-value (1.96) at 0.05 level of significance. Since the calculated t-value (1.49) is less than the critical t-value (1.96), the null hypothesis is accepted. The alternate hypothesis is however, rejected. The result is that the mean rating of lecturers on their competencies in the use of Power Point for instructional delivery in Business Education in sampled Colleges does not significantly differ based on their ownership.

**Table 4:** t-test analysis of mean rating of Lecturers proficiency in the use of Microsoft Excel in Instructional Delivery based on Ownership

S/N	Variable	N	$\bar{X}$	SD	Df	t-cal	t-crit	Decision	Remark
1	Federal	109	3.33	0.88	245	-2.71	1.96	Reject H <sub>0</sub>	Significant
	State	138	3.59	0.64					
2	Federal	109	3.49	0.71	245	0.27	1.96	Accept H <sub>0</sub>	Not significant
	State	138	3.47	0.70					
3	Federal	109	3.14	0.74	245	-3.69	1.96	Reject H <sub>0</sub>	Significant
	State	138	3.46	0.61					
4	Federal	109	2.97	0.64	245	-1.77	1.96	Accept H <sub>0</sub>	Not significant
	State	138	3.13	0.73					
5	Federal	109	3.03	0.71	245	-1.74	1.96	Accept H <sub>0</sub>	Not significant
	State	138	3.18	0.64					
6	Federal	109	2.73	0.84	245	-2.31	1.96	Reject H <sub>0</sub>	Significant
	State	138	2.97	0.76					
7	Federal	109	2.90	0.75	245	-1.19	1.96	Accept H <sub>0</sub>	Not significant
	State	138	3.02	0.81					
8	Federal	109	3.03	0.90	245	-1.10	1.96	Accept H <sub>0</sub>	Not significant
	State	138	3.15	0.95					
9	Federal	109	3.17	0.90	245	-0.95	1.96	Accept H <sub>0</sub>	Not significant
	State	138	3.27	0.76					
10	Federal	109	2.94	0.88	245	0.16	1.96	Accept H <sub>0</sub>	Not significant
	State	138	2.92	0.78					
<b>t-test Summary</b>	<b>Male Lecturers</b>	<b>109</b>	<b>3.07</b>	<b>0.83</b>	<b>245</b>	<b>1.58</b>	<b>1.96</b>	<b>Accept H<sub>0</sub></b>	<b>Not significant</b>
	<b>Female Lecturers</b>	<b>138</b>	<b>3.22</b>	<b>0.89</b>					

**Source:** Research data, 2018

Data on Table 4 reveals that the calculated t-values on the mean ratings of lecturers on their proficiency in the use of Microsoft Excel for instructional delivery in Business Education in Colleges of Education in South-South, Nigeria based on their ownership. An observation of the summary of the calculated t-value in Table 12 above reveals that the calculated t-value (1.58) is less than the critical t-value (1.96) at 0.05 level of significance. Since the calculated t-value (1.58) is less than the critical t-value (1.96), the null hypothesis is accepted. The alternate hypothesis is however rejected. The result is that the mean rating of lecturers on their

proficiency in the use of Microsoft Excel for instructional delivery in Business Education in Colleges of Education in South-South, Nigeria does not significantly differ based on their ownership

### **Discussions**

The findings from the result of the analysis of research question one in Table 1 revealed that lecturers in business education in colleges of education in South-South, Nigeria have low proficiency in the use of PowerPoint for instructional delivery. The above finding is in agreement with Azuka (2016) who emphasized that lecturers in polytechnics in South-East, Nigeria have low competence in the use of PowerPoint in instructional delivery.

The findings from the result of the analysis two in Table 2 showed that lecturers in are proficient in the use of Microsoft Excel for instructional delivery. The above finding is in conformity with Ngwoke and Numonde (2011) who posited that lecturers in are competent in the use of Microsoft Excel in instructional delivery. Findings from Table 4 indicated that there is no significant difference in the mean rating of lecturers in their proficiencies in the use of Microsoft Excel for instructional delivery based on ownership. The finding is in agreement with Okorie (2015) who stated that there is no significant difference in the competency of business educators in the use of Microsoft Excel in the teaching and learning with regards to ownership of the institution. On the other hand, the finding disagrees with Nwosu and Ogbomo (2012) that there is no significant difference in the competency of lecturers in the utilization of Microsoft Excel in the teaching and learning of business education based on ownership.

The result in Table 3 indicated that there is no significant difference in the mean rating of lecturers on their proficiency in the use of PowerPoint for instructional delivery based on ownership. The findings in Table 3 tends to agree with the finding of Enock (2013) who posited that majority of lecturers have low competence in the utilization of PowerPoint presentation in instructional delivery. In the same vein, Azuka (2016) indentified problems associated with lecturers' low competence in the use of PowerPoint in instructional delivery.

Table 4 indicated that there is no significant difference in the mean rating of lecturers on their proficiency in the use of Microsoft Excel for instructional delivery based on ownership. The finding is in support of Nwosu and Ogbomo (2012) that there is no significant difference in the competency of lecturers in the utilization of Microsoft Excel in the teaching and learning of business education based on ownership.

### **Conclusion**

The study concludes that there is no significant difference on business education lecturers' proficiencies in use of e-visual aid in instructional delivery in colleges of education in South-

South, Nigeria despite the difference in ownership of institutions their ability to acquire skills in the use of PowerPoint and Microsoft Excel could facilitate their student's employability or self-reliance upon graduation.

### **Recommendations**

Based on the findings of the study the following recommendations were proffered:

1. Business education lecturers should ensure that their students are taught the rudiments of e-visual skills to enhance their self-reliance capacity.
2. Business education students should be sensitized that their intellectual capacity rather than their institution ownership is the catalyst for stimulating their performance or excellence in the world of work.
3. Institution owners should encourage new discovery with high potentials for lecturers in Business Education and also ensure that the programme is fully funded.
4. Business education lecturers should ensure that their students are instructed in accordance with the same curriculum that is being used by other institutions in the country.
5. Both lecturers and students of business education programme should develop positive study habits that will enable them to be at par or in the same page with their fellow students irrespective of the institutions.

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## DEMONIZING ISLAMIC MOVEMENT: THE BOKO HARAM INSURRECTION IN NIGERIA

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### **Abstract**

*The so-called Islamic Movements and their activities of attacking Western interests and soft targets in the environment they operate lead to destruction of lives and properties and this has impacted on political and socio-economic activities across the globe. This paper aims at examining the genesis, meaning, objective, and classifications of Islamic Movement in order to have a clear understanding of Boko Haram. The paper use documentary research method and frustration-aggression theory proposed by Dollard (1939) and developed and Berkowitz (1989) as framework of analysis. The paper argues that the so-called Islamic Movements do not have the characteristics of Islamic Movements and do not operate on the basis of the teachings of Islam therefore, they are not representing Islam. The paper believes that Boko Haram is a result of corruption and poor governance which led to weak institutions and increased poverty and unemployment. It concludes that Boko Haram threat needs political solution, and recommends that the Nigerian political leaders should lead by example by demonstrating political will.*

**Keywords:** *Corruption, Poor governance, Poverty, Unemployment, Weak institutions,*

### **Introduction**

The discourse on Islamic Movements in contemporary period is at its height especially from September 11 when the United States of America was attacked. Since then, the attention of the world was drawn to the activities of armed Muslim groups who were given different kind of names – terrorists, fundamentalist, and extremist, etc. These groups engaged in attacking not only the Western interest but also soft and hard targets within the environment they operate where thousands of innocent civilians have been killed, millions displaced, and properties worth billions destroyed. Economic and political activities are also affected severely as insecurity is witnessed across the globe.

*The Jama'atu Ahlis Sunnah Lidda'awati Wal- Jihad (literally translated as "Movement for Call and Striving in the Way of God") popularly known as "Boko Haram" (Western Education is*

Forbidden) is not an exception, especially with its imitation of the strategies adopted by other Islamist groups in trying to achieve its objectives. This paper focused on Islamic Movement. It discusses the genesis, meaning and objective of Islamic Movement, classification of Islamic Movement, in order to have clear understanding of the Boko Haram. The paper however discussed the history, ideology as well as activities of the group (Boko Haram). It also discussed the challenges facing the Islamic Movements in general and made some recommendations. The paper utilizes documentary research method where information has been generated from the secondary sources of data that include; text books, academic journals, newspapers, etc. the data however is analysed qualitatively.

### **The Concept Islamic Movement**

Maududi (1984:p71) defines Islamic Movement as revolution in leadership that rebelled against God and His guidance and is responsible for the suffering of mankind and it's (that leadership) replacement with a leadership that is God-conscious, righteous and committed to following divine guidance. According to him, both the Muslims and non-Muslims have no true knowledge about the Islamic Movement. While the Muslims focus only on the power dimension of the movement without considering it to be central to the Islamic religion, the non-Muslims are against it due to lack of information about its intention (which is replacement of unjust leadership with the just one). He continued that the motive of this movement is not only to replace the leadership that is not Islamic but also to make sure that Islamic teachings are practiced by the members of society in accordance with provision of *Qur'an* and *Sunnah* of the Prophet peace and blessings of Allah be upon him (PBUH). Al-qardawi (1990) defines Islamic Movement as an organized group with specific objective and clear-cut course, that is, restoring Islam to the leadership of society and the helm of life, all walks of life. Al-Gannoushi (2001) define Islamic Movement as a totality of collective and individual efforts undertaken by tens of thousands of believing men and women who are engaged in propagating the Islamic message throughout the world. Islamic Movements is an effort by a group of men and women who are aware of their task and are willing and ready to accomplish that task. Therefore, Islamic Movement is an organized activity that involves efforts by men and women that have clear objective, that is, to restore the Islamic leadership that is based on *Qur'an* and *Sunnah* for a just society.

### **Theoretical Framework**

Considering the above discussions on Islamic Movement, one can conclude that Boko Haram is radical group and their actions contradict the actions of Islamic Movement as defined by the *Qur'an* and *Hadith*. However, Boko Haram actions are as the result of frustration caused by poor governance which led to increased poverty, unemployment and poor living standard especially in the affected Geopolitical Zone. Therefore, frustration-aggression theory is relevant in analyzing Boko Haram uprising in Nigeria. Frustration-aggression theory is a theory of aggression proposed by John Dollard (1939) and developed by Leonard Berkowitz



(1989). According to this theory, aggression is the result of interference with person's effort to attain a goal. Berkowitz (1989) argued that frustration causes aggression, to the extent that it turns violent. Therefore, the central assumption of this theory is that aggression is a result of frustrating one's effort to attain a desired goal, which ultimately leads to violence. This theory is relevant to this study. There are perspectives on what led to the emergence of Boko Haram group. Shuriye, Adeyemi and Huud (2013) argued that the failure of the Nigerian leadership to establish good governance affected the national integration which leads to poverty and unemployment. Also, the weakness of the security services (lack a better approach in confronting crisis) lead to tension and frustration, which leads to escalation of crisis, therefore Boko Haram emerges as a result of poverty and unemployment and the weakness of security services (Walker, 2012, Mohammed, 2014, Onuoha cited in *de Montclos*, 2013). Walker (2012) for instance argued that politicians only overcome conflicts if they are not to their advantage, and the method use by the security in dealing with conflict is with violence, Boko Haram is created under such circumstance. However, the first perspective which emphasis on relatively absence of good governance which lead to poverty, unemployment as a factor that lead to the emergence of Boko Haram is related to the second perspective which lays emphasis on the weakness of political institutions and security services. This is because it is the lacks of political will that lead to poor governance which leads to the weakness of the political institutions including security services. It also leads to corruption, poverty, unemployment and other socio-economic problems, for instance, according to Oxford Poverty Human Development Initiative (OPHDI).

The Northern part of Nigeria has the most deprived States as measured by the Multidimensional Poverty Index (MPI) across various domains with the most deprived State being Yobe, with an MPI of 0.635, followed by Zamfara State with an MPI 0.605. The situation is different in the South West which has two of the least deprived states - Lagos and Osun, with MPIs 0.035 and 0.043 respectively (United Nations, 2018). Also the North-East had a shrinking middle class and the largest increase in income inequality, as measured by Gini Coefficient over this period (United Nations, 2018). On unemployment, survey conducted shows that an average of 76.78 percent of respondents surveyed in six states agreed that youth unemployment has contributed to the Boko Haram insurgency while 20.28 percent disagree (United Nations, 2018). Therefore, weakness of political institutions leads to deprivation of north and especially north-eastern region and this in turn leads to increase in poverty and unemployment, hence the emergence of Boko Haram. On weakness of security services however, Serrano and Pieri (cited in *de Montclos*, 2013) argued that Nigeria ranks highest in terms of the ratio of militant to security force deaths compared with counter insurgency operations in Northern Ireland, Colombia, and Chechnya. And this is as a result of brutality of the Forces and its inability to contain the group due to lacking a better war strategy. However, poverty and unemployment produce members for the group. Understanding the

origin and activities of the group will help us to analyze, understand and assess the group. It will also help us to conclude if Boko Haram is an Islamic Movement.

### **Objective and Genesis of Islamic Movement**

The main objective of Islamic Movement is bringing Islam to the leadership of society. According to Maududi (1984) a leadership that rebelled against Allah and His guidance lead to injustice and therefore need to be replaced by a leadership that is Allah-conscious, righteous, committed to following Divine guidance. The aim is to guide humanity to almighty Allah, enlightened hearts, with the light of divine guidance and increase the harmony between their individual and collective conduct (Al-Gannoushi 2001:p109). To achieve this objective according to Al-Qardawi (1990) there should be what he called “*new fiqh*”, that is, as he quoted Imam Al-Gazali “revival of science of religion” - an in-depth understanding of the unchanging practices of Allah in souls, minds and horizons, His reward and punishment.

Islamic Movement is as old as the Islamic religion itself (Maududi, 1984). Mamman et al (2014:p.53) traced its origin to the life time of Prophet Muhammad (peace be upon him) and his successors in 662 AD. And that the struggle for political power could be dated back to period when the Prophet and his companions migrated from Mekkah to Medinah to establish political base (state) in accordance with the divine will.

The contemporary Islamic Movement however emerged as a result of expansion of imperialist as well as colonization of many Muslims States which led to the shift of world centers from eastern and southern Mediterranean shores in Cairo, Baghdad, Damascus and Istanbul to London, Paris and Vienna (Al-Gannoushi, 2001). According to Al-Gannoushi (2001) however, the turning point in the balance of power were the defeat of Othman Army in the fifteenth century, the discovery of the new American continent, and the control of international trade root. This also paved way for colonization of Arab and non- Arab countries (Mamman et al, 2014). Since then, Islamic civilization was dominated by West. Al- Attas (2015) however, believes that the scientific revolution in the Western Europe in the 13<sup>th</sup> century, which led to its growth in military and economic power as well as the establishment of trade link in Indian Ocean in the 16<sup>th</sup> Century affected the Islamic World economically, he also believe that colonization of some part of Muslim World led to the spread of Western views which dominated the Muslims intellectually. Secularization process and nationalistic feelings were imposed and people were forced to abandon their moral and religious principles and were encouraged to adopt Western political culture of freedom of conscience, speech, association, political parties, political opposition, election and entrenchment (Mamman et al, 2014). In post colonial period however, a vertical relationship; economic, political and cultural symbols between the centre and periphery was sustained by the use of elites in the periphery who undergone training and acquire Western education (El-Affen, 2001). The elites being absorbed by Western culture continued with the practice of Western political structures of

parliamentarianism, presidential, constitutionalism, democratization, among others (Mamman et al 2014). Motem (1996 cited in Mamman et al 2014) argued that rule of law and separation of powers, were purposely applied to take over the position of caliphate. Countries such as Turkey, Algeria, Egypt, and Tunisia among others were affected by this development. However, Islamic Movement in contemporary period evolved out of this development and its aim is to restore Islamic leadership in Muslim societies, and make sure that Islamic civilization prevail. But the question is this, are all the Movements Islamic?

### **Classification of Islamic Movement**

There were many attempts to classify the Islamic Movement based on their approach and method toward surviving the domination of Western values in the Muslim World. Since the 9/11 attack on the United States, Western intellectuals became interested in studying these movements and their classification made it easier for them to examine and analyze their attitudes (Samiullah, 2012).

Benard (cited in Samiullah, 2012) divided the whole Muslims into four categories as follows:

1. Fundamentalist: This category according to him rejects democratic values and contemporary Western culture. What they want according to him is a state that will implement their extreme views of Islamic law and morality. They are willing to use modern technological innovation to achieve their goal.
2. Traditionalists: These according to him are those who want a conservative society. They suspect modernity, innovation and change.
3. Modernists: This category want Islamic world to modernize. They want to modernize and reform Islam to be in line with the modern age.
4. Secularists: This category want the Islamic world to accept and apply the concept of secularization as practice in the West that is, relegating religion to be personal or private life.

Benard (in Samiullah, 2012) put radicalist in fundamentalist category. He then divided them into two sub-categories, that is, scriptural fundamentalists in which he cited Shi'ite revolutionaries and Saudi based *Wahhabies* as example. However, the term used extreme views in addressing fundamentalist is not accepted by the convention of Islamic scholars and Muslims.

The second sub-category was radical fundamentalist, and this category according to him is less concerned with actual teachings of Islam either deliberately or because of their ignorance of orthodox Islamic doctrine. They according to him do not refer to any institutional religious affiliations but tend to interpret Quran based on their knowledge of Islam. He cited Al-Qaeda, Afghan Taliban, Hizbut-Tahrir among others as an example of this category. However, Boko Haram group could also fall under this category.

However, though Benard give the explanations on fundamentalism as a movement, the remaining categories should not be called Islamic Movement for the Movement (Islamic) is only based on *Qur'an* and *Sunnah*, and the remaining categories contradict these. Even the Shi'ite which he put in the fundamentalist category does not follow the teachings as practiced by the Prophet and his Caliphates. On radical or extreme views however, the convention of Muslim scholars believe that there is nothing like that in Islam. Therefore, radicals or extremist do not have place in Islam, what we see are groups of armed Muslims struggling for one reason or another. Considering the teachings of Islam, Islamic Movement is not violent, and it does not have to be violent in its activities of bringing Islam to the position of authority. All is needed is "*new fiqh*", the Boko Haram has lacked it. Its emergence is a result of frustration resulted from deprivation by the leadership of their State (which is characterized as weak, corrupt, and unaccountable). Qur'an 4:29-30; 4:93; 5:32; and 6:151, show how sinful it is to kill innocent person. For instance, Chapter five, verse 32:

*"...if any one slew a person - unless it be for murder or for spreading mischief in the land - it would be as if he slew the whole people: and if any one saved a life, it would be as if he saved the life of the whole people."* (Qur'an, 5:32)

Example of Islamic Movement include; the Salafiya Movement of Muhammad ibn Abd alWahhab (1703-1792 CE), the Sokoto Jihad led by Sheikh Uthman ibn Muhammad Fudi (1754-1817 CE), the Mahdiyah Movement led by Muhammad Ahmad ibn Abd Allah (1834-1885 CE), the Muslim Brotherhood found by Hassan al-Banna in 1928 and currently led by Mohammad Badie. The following discussion on how Boko Haram emerged.

### **Understanding the Boko Haram "Islamic Movement"**

*Jama'atu Ahlis Sunnah Lida'awati Waljihad* popularly known as Boko Haram is group of radicals in Northern Nigeria. The group's ideology share certain commonalities with *khawarij* ideology (based on its actions of killing innocent Muslims and none-Muslims in the name of Allah and Islam, suicide, referring to leaders and followers of none-Islamic leadership and the leaders as idolatrous, of being the only true Muslims, and bombing worship places in the name of Allah, etc.). The group has a belief that politics in Nigeria is dominated by a group of corrupt and irresponsible leaders whose actions lead to abject poverty, unemployment, and other socio-economic problems. Therefore, according to the group it fights for establishment of Islamic State which would be ruled by Sharia Law. Boko Haram emergence was a reflection of long history of poor governance in Nigeria (Campbell, 2014, Walker, 2012, Onouha, cited in de Montclos, 2013). The extreme poverty and unemployment played a major role in shaping the group's goal, which is according to them was establishment of Islamic State based on Sharia law for just society. Although there are variations on when the group emerged, there

is a consensus that the group emerged openly to challenge the Nigerian State in early 2000s (Salihi, 2012 Campbell, 2012, Walker, 2012).

Initially, the group members worshiped at Alhaji Muhammadu Ndimis Mosque and other mosques in Maiduguri. In 2002, some of the group members decided to relocate to Kanamma village in Yobe state after declaring that Maiduguri was ruled by corrupt and unjust leaders. The group intended to set up an Islamic State which would be ruled by Sharia with its leader Muhammad Ali (though their actions contradicted the true teachings Islam). This period was called a First Phase by Mohammad (2014) and it covered 2003 to 2005. Conflict occurs in December 2003 between the group members and police over the ownership of local fish pond where the group overpowered the police officers and carried away their weapons (Walker, 2012). This development however led to involvement of Army which resulted to many casualties, including the death of Muhammed Ali. Those who survived returned to Maiduguri where they met with their members in Maiduguri under the leadership of Muhammad Yusuf who later built a new Mosque for members and named it *Ibn Taimiyyah Masjid* (Waller, 2012). This period according to Mohammad (2014) was the Second Phase which was characterized by recruitment of new members, and radicalization of the members. It also marked the period of extensive criticism of secular system, westernization, democracy as well as criticizing the then government (Ali Modu sheriff's) of being corrupt and for bad governance. This group according to Walker (2012) set up a state within a state, with a cabinet, its own religious police, and a large farm. It recruit more members by offering them food, shelter, and welfare. However, most of those who joined the group were refugees from wars over the border in Chad and jobless Nigerians. The Third Phase according to Muhammad (2014) began in 2009. This phase marked the period when the group had another conflict with authorities over motor cycle helmets which was not worn by the group members while on their way to the funeral of their member. There was report that a group member fired on the police, injuring several officers (Walker, 2012). The conflict escalated with the increase in police offensive on the group. Several members of the group including the group leader Muhamad Yusuf who was captured by Army and handed over to police was killed without trail, although they (police) denied the allegation and stated that he was shot while trying to escape. The group members went into hiding; they re-organized and resurfaced for vengeance in 2010, under the leadership of Abubakar Shekau who was said to come back from Cameroon (Mohammed 2014). Although the group has been weekend by the effort of President Muhammadu Buhari's Administration where Local Governments captured by the Group were liberated by the Nigerian Army, the group still poses a threat to the Nigerian state due to its strategy of Gorilla War where many security officers and innocent citizens have been the target. The President announced on December 24<sup>th</sup> 2016 that Nigerian Army had defeated the group and captured their last camp located in *Sambisa* Forest.

### **Activities of Boko Haram**

Since their reappearance in 2010, the group members engaged in killing police officers and taking away their weapons in Borno and Yobe. They also attacked local leaders who cooperated with the police in identifying the group members (Walker 2012). The group target extended to civilian, where churches and market places became target. For instance in 2010, During Christmas celebrations, bombs were detonated near churches and a market in Jos, Plateau state, where scores of people were killed (Walker, 2012). With more crack down of the group by the military, the group became more radical and desperate, and extend its targets to more states and public places such as schools, markets, hospitals, churches, mosques, telecommunication facilities, and Nigerian Police Headquarters and UN building in Abuja (in 2011) among others. The target of the group extended to not only the north-west (Kano, Kaduna, Katsina) but also middle belt (Kogi), south-west (Lagos) and an arrest of the members of the group was made in south-east (Enugu). The group kept on changing its method of attack with the change in the local and international development (Mohammed, 2014). Suicide attacks by young females, beheading captives, releasing videos and audio of their activities and taking responsibility of attacks, and the allegiance to Islamic State (IS) by the Boko Haram was a proof to that.

The activities of the group were not only limited to attacks, there were cases of abduction of people especially young, looting, destruction of properties, bank robbery, and cattle rustling etc. A good example was the abduction of schools girls (over two hundred) in Chibok town in April, 2014; though some were released many of them are still not found. However, the estimated people killed by Boko Haram from 2011 were over thirty thousand (30,000) with million Nigerians seeking refuge within and outside the country. In 2014, Boko Haram was responsible for around a third of all civilians killed in conflict in Africa (Zamfir, 2015). The activities of the group extended to the neighboring countries of Chad, Cameroun, and Niger, where many villages were attacked, this necessitate more active joint effort to deal with the threat. Military operations took a cross-border dimension in January, 2015, when Chad got an authority from Cameroun Government to deploy military forces along its border with Nigeria and the Chadian troops were also operating in Nigeria's soil, Niger, Benin joined the fight, (Zamfir, 2015). On 20 January, 2015, thirteen (13) leaders from West and Central African countries met and discuss on how to set up a Multinational Force to tackle the Boko Haram (though Nigeria was not represented). African Union (AU) also supported the effort made by these countries where it made decision on 29 January, 2015 under its Peace and Security Council (PSC) over deployment of the Multinational Joint Task Force (MJTF), where seven thousand five hundred (7500) military and non-military staff to be used for the first twelve months, which can be renewed (Zamfir, 2015), the aim of setting these Force according was to restore authority of states and facilitate the humanitarian assistance, achieve coordination at inter-state level, border patrols, finding abducted persons, stopping flow of arms,

reintegration of the insurgents into society, and bringing those responsible for the crimes to justice (Zamfar, 2015:p3). However, the UN was asked by PSC to adopt a resolution that would authorize the military operation and create Trust Fund and mobilize intentional support (ibid). The proposal of PSC was endorsed by the AU Assembly at the AU's 24<sup>th</sup> Summit, Addis Ababa on 30 and 31 January, 2011, (Zamfar, 2012:p4). The Force began its operation as planned and many territories that fall to the Boko Haram before were liberated and scores of the group members were killed. The group became in defensive side.

The group split in August 2016, and as a result, attacks have intensified, especially on military and its formations by the Abu Musab al-Barnawi faction (Abu Musab al-Barnawi was crowned as the new governor of Islamic State-West Africa faction supported Islamic State in Iraq and Levent - ISIL), which was rejected by Shekau who continued to lead the insurgents under the group's previous name (Jama'atu Ahlis Sunna-lilda'awati Wajihad) and targeting military and civilians (Institute of Security Studies in Defenceweb, 2017). This development worsened the situation, impacting on the socio-economic and political activities in the Lake Chad region (Nigeria, Niger, Chad and Cameroon). According to Civil Society Network (in *Vanguard*, 2016) Boko Haram killed 23000 people and displaced 2.15 million. The group resorted to attacking military formations where they killed many soldiers in different ambush. One of the latest attacks was on highway between Gubio and Magumeri in which dozens of soldiers were killed in an ambush attack in which the attackers use anti-aircraft and other weapons (Sahara Reporters, September 26<sup>th</sup>, 2019). This proved that the group still exist, and remain a threat to Nigeria especially with its allegiance to ISIL which has a global network. Recent data showed that the activities of Boko Haram still pose a threat to the security and economic activities of the Lake Chad region. Many people have lost their means of subsistence and are now living in Internally Displaced Persons (IDPs) Camps. Trans-border businesses have been paralyzed due to insecurity. The displacement of people in the four countries - Nigeria, Cameroon, Niger, and Chad, has led to establishment of Internally Displaced Persons (IDPs) Camps. In Nigeria 2,026, 602 people were displaced; in Cameroon 244, 347 were displaced; in Niger 104, 288 were displaced; and in Chad 122, 312 were displaced. 94 percent of these people were displaced by conflict, 6 per cent by communal clash, and less than one percent by natural disaster (United Nations Migration Agency, 2019). As a result of this threat more forces and resources have been deployed by these countries to contain the group. This would also negatively affect the development of respective states for more resource that would have been used for human and infrastructural development is now being used to fund military campaign against the group.

The political and socio-economic challenges include the following: destruction of public properties, inability of the governments of the affected states to provide social amenities, uncertainty in the boarder and major markets in the affected states, discouraging foreign investors and customers, destruction of institutions of learning, funding the war by the

Federal Government among others. These problems lead to contraction of government capital expenditure as a result of more spending on the war by the affected States and Federal Government, contraction of economic activities due to declining foreign investment and withdrawal of international customers from neighboring countries. It also led to increased illiteracy level as a result of destruction of institutions of learning which led to drop of many children from schools. This situation would worsen poverty and unemployment, and lead economic backwardness. For instance, 74 percent of Nigerians live below income level of \$1016 per year in urban areas (N203,000 per year or N16900 per month) and \$758 per year in rural areas (N151,600 per year or N12600 per month). Out of this, some 40 percent live under the poverty line, that is, live on less than \$1.25 per day, N7500 per month and N91500 per annum, 49 percent and 48 percent lower than that required as monthly and annual income respectively (*Thisday*, 2016).

### **Challenges of the Contemporary “Islamic Movement”**

The so-called Islamic Movement in contemporary period faces so many challenges. First is the issue of understanding the Islamic religion, its teachings, principles as well as its definition of and processes of establishing an Islamic State. Maududi for instance discussed on the conditions that a movement must meet in order to be called Islamic, for, Islamic Movement has its bases on the *Quran* and *Sunnah* and has unique characteristics.

For the movement to be called Islamic, it must have Islamic Morality. According to Maududi (1984), Islamic Morality according to *Qur'an* and *Hadith* contains four aspects.

1. *Iman* (faith in Allah)
2. *Islam* (surrender to Allah)
3. *Taqwa* (Allah consciousness)
4. *Ihsan* (Godliness)

*Iman* means belief in the Unity of God and the prophet hood of Muhammad, blessings and peace be on him (Maududi, 1984:p112). Islam is the practical demonstration of man. *Taqwa* According to Maududi means a state of inner self which reflect in every part of life. It consists of mans awe of God, consciousness of his duty towards Him and an awareness of his accountability to Him; and *Ihsan* according to Maududi is the highest stage of Islam. It implies the deep attachment, profound love, genuine faithfulness and sacrifice which make a Muslim completely identify himself with Islam (Maududi, 1984:p119). However most of the Islamist groups are faced with the problem of lack of what Al-Qardawi “New fiqh”, that is, an in-depth understanding of practices of Allah in souls, minds and horizons as well as His reward and punishment Hereafter. Most of them do not demonstrate the real Islamic Morality. This could be proved by some of their actions which they always try to depend by quoting Quran, even though they were challenged by the convention of Islamic scholars across the globe. However, Islahi (1982) stated the causes of the failure of Islamic Movements which includes the following:



1. **Lack of sincerity and God-consciousness.** That is, the worker's absolute complacency and commitment at heart, activeness and vigilance of mind, to submit himself to the objective of the Islamic Movement that he is attached to, he should not allow worldly affair to intrude with his desire. There is also desire to submit everything - his attachment to the Movement all his efforts on the path - to one single cause - the acquisition of Allah's Will. Many members of Islamic Movements are lacking this.
2. **Unsound knowledge and improper insight.** This according to him includes unsound power of *Ijtihad* and lack of insight into *Diyn*. It is a strategic absence of the practical ability by the members of the movement to drive guidance from the original sources of Islam.
3. **Personality cult.** When one accepts opinion or rejects it, one does not do it on his own judgment but according to what the beloved person does. One thinks it absurd to judge his opinion from the angle of right or wrong. One is not willing to accept any weakness in his thought, belief or action. Most of the contemporary movements based on this (Boko Haram inclusive).
4. **Group prejudices.** Presence of communal feelings among the workers of the movement. That all *da'awah* movements beginning their task with sincerity but when the cursed communal virus sets in, it mars the whole vision of workers.
5. **Improper use of personal opinion.** That no movement whose workers are incapable of sacrificing personal views in favor of the majority view can hope to achieve their goal.

The So-called Islamic Movements of this contemporary era are characterized by almost all the above problems stated by Islahi. Most of the members of the Movements do not have an in-depth understanding of *Quran* and *Hadith* which are the basis of Islamic Morality. Most of the Movements (Islamist) base their activities on the wrong interpretations which are always challenged by the majority of Islamic scholars. Despite the challenge however, they insisted that their interpretations are the correct and they are the only true Muslims. Movements such as Islamic State (IS), Alshabab, Boko Haram, among others are example.

EL-Affend (2001) also argued that the main problem facing Muslims today is the inability to have a consensus as far as methodology of change is concerned. While some are advocating for multiparty system, others are suggesting a unity party because according to them Islam is a whole and that there should be no division among the Muslims. However, while some are employing a violent approach others are calling for peaceful approach as done by Muslim Brotherhood. He advocated a peaceful approach in an attempt to establish an Islamic State.

### **Conclusion**

Boko Haram though it claimed to be Islamic and intended to establish a Caliphate, its activities contradict Islamic Teachings in *Qur'an* and *Hadith*, they are not based on Islamic morality. The

root cause of the movement is socio-economic factors, that is, poverty and unemployment which are products of poor governance, corruption and weak of political and security institutions.

### **Recommendations**

Some recommendations are made;

1. First, the African and Nigerian leaders in the position of authority should have political will and lead by example. This would ensure accountability and of being responsible by focusing on welfare and wellbeing of Nigerians rather than pursuing personal interest.
2. Second, the affected areas should also be given special consideration by providing more social amenities and infrastructure. This will attract more investors and generate employment opportunities, thereby reducing the unemployment rate.
3. Third, the activities of scholars (from any religious affiliation, such as preaching) should be monitored by the authority; this will give the authorities an opportunity of detecting any threat before it escalates.

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# MULTINATIONAL CORPORATIONS (MNCs) AND SUSTAINABLE DEVELOPMENT GOALS IN DEVELOPING COUNTRIES: QUERYING THE IMPACT OF SHELL PETROLEUM DEVELOPMENT COMPANY IN NIGERIA

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## **Abstract**

*The study titled “Multinational Corporations (MNCs) and Sustainable Development Goals in Developing Countries: Querying the impact of Shell Petroleum Development Company (SPDC) in Nigeria” is a critical examination and assessment of the operations of Shell Petroleum Development Company in the development or otherwise of Nigeria. This is largely due to the gap observed in terms of development challenges in most developing countries, Nigeria inclusive. The study employed Dependency theory as its underpinning and data were collected through secondary sources, while content analysis was used to analyse the data collected. The study however revealed that Multinational Corporations in Nigeria particularly, Shell Petroleum Development Company (SPDC) does not help development in Nigeria rather it becomes an impetus for underdevelopment and confrontation in many dimensions. Most especially in the area of poverty and health challenges as a result of environmental degradation that ravaged communities in Niger-Delta region of Nigeria. In view of the above findings therefore, the study recommends among others that, the Nigerian government should go back to the drawing board and take a critical review of the activities of Shell Petroleum Development Company (SPDC) in Nigeria to agree with the development challenges facing the country especially in the host communities.*

**Keywords:** *Multinational Corporations; Development; Developing Countries; Nigeria; Sustainability*

## **Introduction**

Multinational corporations are business entities that operate in more than one country. Multinational corporations (MNCs) have been a source of controversy ever since the East Indian Company developed the British taste for tea and a Chinese taste for opium (John, 1998). A typical multinational corporation (MNC) normally functions with a headquarter that is

based in one country, while other facilities are based in locations in other countries. In some circles, a multinational corporation is referred to as a multinational enterprise (MNE) or a transnational corporation (TNC) (Tatum, 2010). The idea of multinational corporations has been around for centuries but in the second half of the twentieth century multinational corporations have become very important enterprises.

Due to their size, resources and their nature of being on-going business concerns, these Multinational Corporations have constantly evolved their operations and improved their processes to make them stand the test of time and also improve their profitability. This on-going evolution inadvertently has seen the development of technological capabilities and skills which are thus attributable to the nations of origin of the MNCs, and has added immensely to the wealth of such nations, and most times do not do same for the countries hosting these MNCs. Multinational corporations (MNCs) are often accused of destructive activities such as damaging the environment which resulted into intensive poverty, complicity in human rights abuses, and involvement in corruption. Indeed, multinationals today are viewed with increased suspicion given their perceived lack of concern for the economic well-being of particular geographic regions and the public impression that multinationals are gaining power in relation to national government agencies, international trade federations and organizations, and local, national, and international labor organizations (Guyon, 1984).

Shell is a multinational corporation that for almost 50 years has been intimately involved in Nigeria's political economy genre. Shell generates billions of dollars in export earnings while providing the federal government with some of its revenue. Shell has also been implicated in governmental military actions that have resulted in the killings of non-violent community, human rights and environmental activists and local villagers, as well as the oppression of ethnic minorities. They have been seen as being complicit in widespread corruption and as a large contributor to the self-enrichment of government officials and powerful, local interests. They have also been viewed as a principal agent of widespread environmental degradation in what is recognized as one of the world's biodiversity hotspots.

In spite of the widespread adoption of and progress toward the Sustainable Development Goals, Nigeria continues to lag behind most of the world when it comes to socio-economic development. In fact, a recent report by the Sustainable Development Goals Center for Africa- "Africa 2030: Sustainable Development Goals Three-Year Reality Check" reveals that minimal progress has been made and, in some instances, there is complete stagnation. More than half of the global poor (those who earn under \$1.90 PPP per day) are found in Africa. One in three Africans is at the risk of food insecurity (Belay, 2019).

### **Theoretical Framework: Dependency theory**

Dependency theory is a perspective of Neo-Marxists, notable among them are Samir Amin (1976), Theotonio Dossantos (1970), Andre Gunder Frank (1967), Lall Sanjaya (1975), Emmanuel Aghiri (1972) among others. The central thesis of this theory anchored heavily on unequal exchange that takes place between the Capitalist West or their agents and the periphery, which culminate into exploitation of the periphery by the centre as postulated by Marx and other underdevelopment scholars. Dependency theory also holds that “the condition of underdevelopment is precisely the result of the incorporation of the Third World economies into the capitalist world system which is dominated by the West and North America” (Randall and Theobald, 1998), hence in development studies, dependency implies a situation in which a particular country or region relies on another for support, “survival” and growth.

The third world countries are the economically underdeveloped countries of Asia, Africa and Latin America, considered as an entity with common characteristics, such as poverty, high birthrates, and economic dependence on the advanced countries. This implies that the third world countries where Nigeria comes from have the tendency of being exploited. Distinctively, the underdevelopment of the third world countries is marked by a number of common traits; distorted and highly dependent economies devoted to producing primary products for the developed world and their agents as well as to provide markets for their finished goods.

The unequal relationship created by capitalist expansion and its attendant consequences has made dependent development sacrosanct in Africa and Nigeria in particular. It is obvious that Multinational Corporations (MNCs) are agents of capitalist west, where Shell Petroleum Development Company engaged in oil exploration and exploitation in Nigeria. The activities of Shell Petroleum Development Company in Nigeria have been accused of deepening development challenges in the country, especially the host communities. Unfortunately, the Comprador bourgeoisies in Nigeria are in constant contact with their masters in the capitalist west for perpetual exploitation of their fellow Nigerians thereby leading them to abject poverty, medical impairment, food insecurity and lots of tragedy.

### **Multinational Corporations and Dependent Development**

The most instructive position of the Dependence theorists is that MNCs are tools for the propagation of ‘Dependent Development’, i.e. a situation whereby independent national economic development by Third world countries is stunted with the introduction of FDI. The independence of the host country to develop its consumption patterns according to its domestic needs is lost to the MNCs which influences the consumption pattern to agree with its investment motives. By this, the Third World countries’ economies now become an extension of the economy of the country of origin of the MNC. Jonathan Galloway words captures this problem very clearly as he is quoted by Adeoye Akinsanya; MNCs integration

of the Western World's economy to the linkage of the Third World to this more integrated economic growth and is consequently an impediment to stable political and social development. (Akinsanya, 1984:190).

Defenders of the activities of the MNCs in Third World countries argue that the MNCs supply resources which are not readily available, or available in short in short supply, resources like capital, technology and marketing skills. They also claim that MNC activities result in job creation and increase the international purchasing power of the host nations. These arguments on the surface may hold true but a deeper evaluation the resultant effect of MNCs' activities shows that the host nations are usually worse off when a holistic view is taken. Firstly, MNCs may have initially brought in capital but this is quickly repatriated to the originating country via tools like transfer pricing, over-invoicing of imported components of production, under-invoicing of exported goods, overpricing of technology, abuse of expatriate staff quotas, etc.

Secondly the creation of jobs by MNCs is more of a mirage than reality. They provide fewer jobs and cause serious job loss due to their use of capital-intensive technology which require fewer hands to operate and leaves the abundant unskilled labour force without jobs (Akinsanya, 1981). In addition to this, MNC operations are usually not fully integrated into the mainstream economy of the host nations. Their activities turn out highly developed enclaves which are almost independent of the host country's economy. One cannot overlook the inappropriate, and sometimes destructive, consumption patterns encouraged by the MNCs. This aid and encourages the uneven distribution of wealth, income and privileges among the people of the host nation as they respond to the product differentiation and marketing/advertising techniques applied by the MNCs.

### **The Activities of Shell Petroleum Development Company (SPDC) in Nigeria**

Shell first set up shop in Nigeria in 1973. Today's representatives of Royal Dutch Shell Nigeria have shown themselves willing and very able to take on this task. On July 21, they engaged in a one hour-plus online dialogue with journalists, bloggers, and other interested parties from around the world regarding the multinational oil and gas giant's numerous and varied activities - in the West African nation, the continent's most populous (Okronta and Douglas, 2001).

Nigeria was estimated to have 37.2 billion barrels of proven oil reserves as of January 2010, with a "name plate" production capacity of around 2.9 million barrels per day (b/d), according to the US Energy Information Administration. That makes it the tenth largest oil rich nation in the world, one that holds nearly 30% of the African continent's known prove reserves. Some of that is located in Okrika Local Government Area, in the Niger Delta region, where Shell Nigeria, with the Bonga deep water project, is now moving its Nigerian oil and gas production of ports offshore. Oil and gas revenue accounts for 40% or more of Nigeria's



GDP, 65% of Federal Government Revenue and 95% of its foreign exchange earnings. Nearly 40% of the country's oil exports wind up in the US. Spread over 30,000 square kilometers, shell has 90 oil fields, 10,000 producing wells, 72 flow-stations, 10 gas plants and two major oil export terminals in Nigeria. Its network of flow lines and pipelines extends more than 6,000km.

Shell's business in Nigeria is organized into three distinct subsidiaries, the principal and lead being the shell Petroleum Development Company of Nigeria, or SPDC for short. It is a joint venture between shell (30%), Apip's NOAC (5%), Total's TEPGN (10%) and Nigeria's National Petroleum Co., which holds a 55% interest. Shell Nigeria Gas Ltd is the only International Oil and Gas Company supplying natural gas to industry locally. Shell Nigeria Exploration and production Co. Ltd. (SNEPCO), operates the Bonga, Nigeria's first deepwater offshore oil and gas discovery, one with the capacity to produce more than 200,000 barrels per day of oil and 150 million standard cubic feet of gas (SCF) per day. In addition to its oil and gas operations within Nigeria, Shell also refines large quantities of Nigeria's oil exports at refineries outside the country (Kolawole, 2004).

Nigeria is the only country in African where Shell is producing oil and natural gas, or has oil and gas resources, according to its 2010 annual reports. Proved oil and gas resources totaled 406 million barrels, and proved natural gas resources totaled 1,092 million SCF for a total 594 million barrels of oil equivalent (BOE). Proved undeveloped reserves totaled 344 million barrels and 1,897 million SCF, respectively, a total 671 million BOE.

SPDC was the first and remains the only international oil and gas company to supply natural gas within Nigeria, a country, ironically, that experiences almost chronic shortages of electrical power. SPDC produces about 70% of the country's natural gas, the primary fuel for electrical power generation.

### **Shell Petroleum Development Company (SPDC) and Development Challenges in Oil Producing Communities of Nigeria**

Spanning some 112,000 square kilometers, the Niger Delta region is a wetland area made of several ecological zones, including sandy coastal ridge barriers, mangroves, permanent and seasonal freshwater swamp forests. It is home to more than 3,000 communities and a growing population recently estimated at some 30 million, which the United Nations Development Program (UNDP) projects will increase to 46 million by 2020. Subsistence farming and fishing, or some combination thereof, are the principal mainstays of residents' livelihoods. Urbanization, industrialization and deforestation are taking a heavy toll on the Delta region's soil, land, water and air. The country's forest area has been reduced by around half between 1990 and 2009, which is degrading the region's agricultural productivity and water resources. Local activists and residents, as well as local and foreign scientists and researchers, have

decried the fouling of the Delta region's air, land and water, much of it attributed to pollution associated with oil and gas exploration and production (Abdul and Gudimetta, 2010).

Exploring for and producing oil and gas is a risky business. The benefits of plentiful fuel and power, and the jobs and incomes it provides are substantial. They also come with costs, ones that are not necessarily seen or felt immediately or even during one person's lifetime. They are ultimately economic in nature, but are more completely viewed and appreciated in terms of costs to human and environmental health and safety, and their sustainability.

One of the community leaders in the Daka area of Okrika town, Chief Sunday Alatoru, indeed lamented that fishing, which used to be the major occupation among the people, had since been abandoned as a result of the high level of pollution caused by the activities of Shell Petroleum Development Company and a refinery around the area, precisely in Alesa Eleme. He explained that oil companies often flushed waste products into the sea where the people fish, maintaining that such waste products had destroyed the aquatic and their lives; as a people. Alatoru, a retired teacher, said:

*"Our main occupation is fishing. But it is more or less abandoned because the sea is dead. If you go there, you would notice that all the waste products from the refinery are flushed into our creeks, killing all the fish and other aquatic products. The sea is completely dead and we have no source of livelihood again. This has affected our people in a very bad way as our source of livelihood is damaged, not only by the refinery, but the oil companies. If you go out now, you would see pipelines criss-crossing and they often explore, you will see the spillage for months before they come and clear it. They don't clear it after they manage to close the source of the leakage. Again, the vessels coming from outside produce waste, which they release into the sea. All of these have damaged our source of livelihood, which is fishing and, as it is, we are helpless" (Alatoru, 2018).*

Another elder in the area, Mr. James Amikiri expressed dissatisfaction over the level of neglect which, he noted, the area had continued to suffer, while pollution remains their lot. Amikiri pointed out that many youths there were jobless due to the pollution of rivers in the area. Amakiri said, "Environmental pollution is high here and nobody cares for us, there are no jobs. The youths are desperate. You have a family of graduates who yet have nothing doing. So, their frustration is so much and this results into militancy. So, we expect the Federal Government to look into the problem of pollution and ensure the development of this area" (Akasike, 2014).

### **Social and Economic Conditions in the Oil Producing Communities in Nigeria**

Despite the vast oil wealth in the oil producing areas, the region remains poor. Unemployment in the region is still at alarming rate. The SPDC employs only a small percentage of the workforce at the levels of rank and files from the host communities and the country at large. Education levels are below the national average, approximately three quarters of Nigerian children are believed to attend primary school, and national adult illiteracy is estimated at 43 percent, but in parts of the Delta, attendance at primary school dropped significantly and illiteracy is presumably corresponding higher (Gilpin, 2001).

The poverty level is exacerbated by the high cost of living; the influx of people employed in the well-paid energy sector has made Port Harcourt and the other urban areas of the region among the most expensive in Nigeria. The state governments report that only 20 to 25 percent of rural communities and 45 to 50 percent of urban areas have access to safe drinking water; in all likelihood this is overestimated. Proper sanitation is available to less than 25 percent of the population; in Port Harcourt, the region's biggest city, there is no city wide sewage system. This situation is common to much of Nigeria but worse in the delta region, where it is additionally exacerbated in the areas of regular flooding. Water related diseases are widespread and probably the "Central health problem in the Niger Delta region".

As in the rest of Nigeria, electricity supply from the national grid is erratic; in any event, most of the riverine and coastal areas are not connected to the grid, and depend on kerosene stores and lamps or private generations for power. Rivers, Bayelsa and Delta states are projected on the basis of the 1991 census to have a total population of up to eleven million, about 70 percent of the population live in rural Delta communities. While overall population densities are not high, because of the high percentage of land not suitable for settlement, densities per habitable area are very high. High flood levels, projected as a result of upstream dam siltation, threaten to increase densities still (John, 2011).

The forests of the Niger Delta of all types provide important sources of food and income to local communities. Mangrove has over seventy major uses in non-timber forest products include medicines, dyes, thatching, and food species as diverse as monkeys or periwinkles. In the freshwater swamp forests, raffia palm, mango, ogbono (bush mango; a common food ingredient in the local diet and sold across Nigeria), land snails, and other products are all significant. Destruction of "undeveloped" forest is thus as important to local communities as destruction of cultivated land.

### **Conclusion**

The Dependent theorists are strongly of the opinion that the operations of MNCs in Africa brings about serious technological dependence. This state of technological dependence of most African countries impedes, indeed, stifles local development. They also point to this as

a major means by which MNCs perpetuate their exploitative acts. As MNCs usually overprice the materials they import for their operations from their parent companies and grossly underprice the goods they export to their parent companies. This is all in a bid to move out profits that usually were not declared, or to hide these from local taxes, or even to create an image of non-profitability and thus extend their tax and tariff holidays.

However, despite the wide belief that Multinational Corporations (MNCs) is an instrument for development in developing countries, particularly Third World Countries of Asia, Africa and Latin America, but then its presence in Nigeria is more of a curse than blessings in terms of development. A look at the existence of nations and their capabilities shows that there is a glaring disparity among the nations. Given the nature of the African countries, these countries share unenviable characteristics of being poor in factors of production, over population, low in per capital income, labor-intensive, plagued by corrupt governments and serious environmental and health challenge, just to mention but a few.

The obvious fact is that, Shell Petroleum Development Company (SPDC) in Nigeria has not aided development in the country as provided by the Sustainable Development Goals (SDGs), especially Goals 1,2 and 3. The operations of SPDC are said to have worsen or degenerated the livelihood of people of the host communities into penury, and precarious conditions.

### **Recommendations**

In concordance to the findings and conclusion of this study, the following recommendations are made:

- i. Nigerian government should go back to the drawing board and take a critical review of the activities of Shell Petroleum Development Company (SPDC) in Nigeria to agree with the development challenges facing the country especially in the host communities
- ii. There is the need to ensure as a matter of importance and necessity, the issue of Corporate Social Responsibility be prioritized by Shell Petroleum Development Company in Nigeria, so as to achieve Goal 1 (no poverty), Goal 2 (zero Hunger) and Goal 3 (good health and well being) of SDGs.
- iii. Ensure that oil operations are carried out in accordance with all local environmental legislation in force in Nigeria, or with international standards if they are higher.
- iv. Review programmes of community assistance to ensure that development projects are planned by people who are professionally trained, that all members of communities can participate in devising development plans – and not only elites who already have good relations with the oil industry, and that projects genuinely address the needs of the people in those communities.

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## EVALUATION OF SOME VITAMINS AND MINERALS IN PALMYRA FRUIT (*Borassus aethopium*).

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### Abstract

*Palmyra (Borassus spp)* is a genus of six species of fan- palm fruits native to tropical region of Africa and Asia. Palmyra fruit is eaten and the water extract of the fruit is taken as juice and used in making pap. Samples of the fruits were collected randomly from the Palmyra tree in Kaltungo L.G.A of Gombe State. UV-Spectrophotometer was used to quantify vitamins A, B<sub>1</sub>, B<sub>2</sub>, B<sub>4</sub> and B<sub>6</sub> while Atomic Absorption Spectrophotometer (210VGP) was used to determine the concentrations of Na, K, Ca, Mg, Zn, Fe, Cu and Cd. The results revealed that Palmyra fruits contains 0.00mg/l of vitamin B<sub>2</sub>, and is richer in vitamin B<sub>6</sub> ( $1.2 \pm 0.003$  mg/l). The mineral composition showed that the fruit contains a high concentration of Na ( $480 \pm 0.002$  mg/kg) and K ( $340 \pm 0.002$ mg/kg) and a low composition of Ca and Zn ( $28 \pm 0.002$  and  $25.8 \pm 0.003$  mg/kg respectively). There was no Cd present in the fruit. Of the heavy metals, Fe has the highest concentration of  $8.571 \pm 0.250$  mg/100g). From the results obtained, it could be concluded that the consumption of Palmyra fruit should be encouraged since it contains vitamins and minerals required for proper functioning of the body.

**Keywords:** AAS, Minerals, Palmyra, UV - Visible Spectrophotometer, Vitamins

### Introduction

Fruits are vital components of food. They are a good source of vitamins and minerals that can help keep the body healthy. Because of this, the consumption of fruits can help protect and reduce the risk of some diseases. Palmyra (*Borassus spp*) is a genus of six species of fan- palm fruits native to tropical region of Africa and Asia (Wikipedia, 2016). The Palmyra plant (*Borassus aethiopum*) has been described as a palm tree with huge fan shaped leaves (Ahmed *et al.*, 2010). The plant is dioecious and can reach up to 20 m high on average and 1 m in diameter (Muller, 1988). The fruits have a large fibrous pulp that smells strongly of turpentine. The fruits are consumed raw or cooked. The water extract of the fruit is taken as juice and some use in making pap. The kernels contain albumen, which before ripening is

sweet and refreshing. Fresh sap is used as yeast or made into vinegar (Ozgun and Koyunco, 2000).

The term vitamin was derived from "vitamines" a compound word coined in 1912 by a Polish Biochemist Kazimierz Fonk (Maciej, 1981). The name is from "vital" and "amine" meaning amine of life. Thirteen vitamins are universally recognized at present and classified according to their biological and chemical activities (Wikipedia, 2016). Vitamins are classified as either water soluble or fat soluble. In humans the water soluble vitamins are readily excreted to the extent that urinary output is a strong indication of vitamin consumption (Fukuwatiri and Shibita, 2008) while fat soluble proteins are absorbed through the intestinal track with the help of lipids (Maqbool and Stallings, 2008).

Minerals are elements (inorganic) or metals constituting only a small proportion of the body weight. These minerals perform vital functions which are absolutely essential for the very existence of an organism. These include calcification of bone, blood coagulation, neuromuscular irritability, acid-base equilibrium, fluid balance and osmotic regulation.

Certain minerals are integral component of biologically important compounds such as hemoglobin (Fe), thyroxin (I), insulin (Zn) and vitamin B<sub>12</sub> (Co). Sulfur is present in thiamine, biotin, lipid acid and coenzyme. Several minerals participate as cofactor for enzymes in metabolism (e.g. Mg, Cu, Zn, K etc.). Some elements are essential constituents of certain enzymes (e.g. Co, Mo, Se etc.) (Satyanarayana *et al.*, 2006).

There are two categories of mineral essential to the body, macro-minerals and micro-minerals. There should be no mineral deficiency; they all must be maintained in balance with the body. Macro or principal elements are calcium, magnesium, phosphorus, Sodium, potassium, and sulfur whereas micro or trace elements (heavy metals) are iron, silicon, cobalt, copper, manganese, zinc, and cadmium. Most of the required essential minerals are widely distributed in our food and most people eating a mixed diet are likely to receive adequate intakes as the amount required do vary from grams per day (e.g. sodium, calcium, potassium), through milligrams per day (e.g. iron, zinc), to micrograms per day for the trace element

The aim and objective of this work is to determine some of the vitamins and minerals found in Palmyra (*Borassus aethiopum*) fruit.

### **Materials and Method**

**Reagents/ Equipments.** All the reagents were of analytical grades and purchased from Sigma Aldrich. The major Equipments used were UV - Visible Spectrophotometer, Atomic Absorption Spectrophotometer, Centrifuge, pH meter, sieve, pestle, mortar, water bath and oven.

### Sample Collection/Preparation

The sample was randomly collected from Kalorgu in Kaltungo L.G.A of Gombe State, Nigeria. The obtained fruit samples were allowed to ripen and pounded gently so that it softens for easy removal of the fibrous cover and access to the fruit pulp.

**Preparation of sample for vitamin analysis.** A 0.01 g/ml of the fruit extract was prepared by dissolving 1.0 g of the fruit pulp in 100 ml of deionized water and kept vitamins for analysis

**Preparation of Sample for Elemental Analysis.** The fresh pulp was obtained and then dried. The dried pulp was ground into fine particles and sieved. The sieved sample was kept for digestion.

**Determination of Vitamin A.** The method described by Maciej *et al.* (2007) was used and adopted where 1 ml of the fruit extract was measured into a centrifuge tube and 1 ml of KOH in 90% alcohol was added. The tube was stoppered and shaken vigorously for 1 minute. It was then heated on a water bath at 60 °C for 20 minutes, cooled in cold water and then 1 ml of xylene was added. The mixture was shaken vigorously for 1 minute and then centrifuged at 15000 revolution for ten minutes. The upper layer was transferred to a borosilicate glass and the absorbance  $A_1$  read at 335 nm against xylene with a UV - Visible Spectrophotometer. The extract was exposed to sunlight for 45 minutes and the absorbance  $A_2$  was read again at 335 nm. The concentration of Vitamin A  $C_x$  was calculated using the formula

$$C_x = (A_1 - A_2) \times 22.23 \dots\dots\dots 1$$

where  $C_x$  is the concentration of vitamin A in the analyzed liquid

$A_1$  is the absorbance of the obtained extract after centrifugation

$A_2$  is the absorbance of the obtained extract after exposure to light

22.23 is the multiplier received on the basis of the absorption coefficient of 1 % solution of vitamin A

**Determination of Vitamin B<sub>1</sub> (Thiamine).** A modified method of Nethaji *et al.* (2010) was adopted. Fifty milligram's of thiamine hydrochloride was accurately weighed and transferred to a 100 ml volumetric flask. It was dissolved with distilled water and made up to the mark to give a stock solution of 100  $\mu\text{gml}^{-1}$ . Different aliquots of the stock solution were taken in seven different test tubes and serially diluted to cover a concentration range of 0.2 - 14  $\mu\text{gml}^{-1}$ . An accurately measured amount (0.19 ml) of 0.1 M ferric sulphate solution was added and thoroughly shaken and 0.6 ml of 0.1 M potassium hexacyanoferrate (III) solution was then added followed by the addition of deionized water to make it 25 ml. The mixture was allowed to stand for 20 minutes in a water bath at 40 °C. The absorbance of the resulting mixture was



measured at a  $\lambda_{\max}$  of 747 nm with a UV - Visible Spectrophotometer. The test sample was prepared in the same manner with the test sample replacing the thiamine hydrochloride.

**Determination of Vitamin B<sub>2</sub> (riboflavin)** A standard solution of 50  $\mu\text{g}/\text{ml}$  of riboflavin in 10% methanol solution was prepared by dissolving 0.0133g of riboflavin in 100 ml of 10% methanol solution. Five different solutions of riboflavin were made from the standard solution in a 50 ml volumetric flask. The test sample solution was also prepared in the same manner but containing no riboflavin. The absorbances of the solutions were read at  $\lambda_{\max}$  445 nm with a UV - Visible Spectrophotometer with deionized water as blank.

**Determination of Vitamin B<sub>6</sub> (pyridoxine).** An accurately weighed 50 mg of pyridoxine hydrochloride was transferred to a 100 ml volumetric flask, distilled water was added and made to the mark. Different aliquots of the standard pyridoxine hydrochloride solution equivalent to concentrations of 50 - 700  $\mu\text{g}$  (i.e 0.5 - 7 ml) were transferred into series of 50 ml volumetric flasks. A 0.5 ml buffer solution (pH = 3) and 7 ml of ferric ammonium sulphate solutions were added. The contents were thoroughly mixed and allowed to stand for 5 minutes with occasional shaking. Approximately 10 ml of distilled water was added to make it up to 25 ml and the solutions were mixed well. The test solution was also prepared in the same way but containing no pyridoxine hydrochloride. The absorbances of the solutions were determine using UV - Visible Spectrophotometer at  $\lambda_{\max}$  465nm with distilled water as blank (Ahmed, 2012).

### **Digestion of sample**

Two grammes of the sample was weighed and placed into a 100ml conical flask containing 30 ml of concentrated hydrochloric acid (HCl) and heated at 90°C until a clear solution was obtained. The solution was then filtered into a 50ml volumetric flask and deionized water was added to mark. This was labeled A<sub>1</sub>. A volumetric flask containing only 30ml. of concentrated Hydrochloric acid (HCl) without the sample was used as blank and labeled A<sub>2</sub>. This was used for the analysis of calcium, magnesium, potassium and sodium.

Another 2g of the sample was added into a conical flask containing concentrated Hydrochloric acid (HCl) and concentrated Nitric acid (HNO<sub>3</sub>) in the ratio of 3:1 (30ml of HCl and 10ml of HNO<sub>3</sub>). It was heated at 90°C till a clear solution was obtained. A 20ml of the mixture (30ml of HCl and 10ml of HNO<sub>3</sub>) was added to the solution and filtered into a 50ml volumetric flask and deionized water was used to fill it to mark and was labeled as B<sub>1</sub>. Another conical flask containing the reagent (30ml of HCl and 10ml of HNO<sub>3</sub>) was used as the blank. This was used for the analysis of copper, iron, manganese and zinc. These samples were analyzed using 210 VGP (AAS) Atomic Absorption Spectrophotometer.

### Results and Discussions

The results for the determinations of vitamins are as shown in Table 1. From the table it could be seen that the Recommended Daily Allowance (RDA) for vitamin A in adults is 700  $\mu\text{g}$  per day (Food and Nutrition Board, 2015). The vitamin A content of Palmyra fruit obtained in this research is 8.89  $\mu\text{g}/100\text{g}$  which is close to the value (9.80  $\mu\text{g}/100\text{g}$ ) as reported by Pemberton (2005). This indicates that more of the Palmyra fruit would have to be consumed alongside other sources in order to meet up with the RDA.

The RDA for vitamin B<sub>1</sub> in adults is 1.1mg/100g (Food and Nutritional Board, 2015). In this research, it was found that there is no vitamin B<sub>1</sub> present in Palmyra fruit. This result is in agreement to the finding of Davis and Johnson (1987) who reported that Palmyra jaggery contains no thiamine. It implies that Palmyra fruit is not a source of vitamin B<sub>1</sub>. However, according to Mission and Clean (2015), the fruit contains about 0.04 mg/100g of vitamin B<sub>1</sub>. The variation in the two results could be due to differences in geographic locations, climatic factors, effect of temperature and time (Danbature *et al.*, 2014).

The RDA for vitamin B<sub>2</sub> (Riboflavin) in adult is 1.2 mg (Food and Nutrition Board, 2015). The vitamin B<sub>2</sub> of Palmyra fruit obtained in this research is 0.03 mg/100g which is higher than that obtained by Mission and Clean (2015) which is 0.02 mg/100g of palm sugar. This shows that Palmyra fruit alone is not a good source of vitamin B<sub>2</sub> but if consumed with other sources vitamin B<sub>2</sub> could be a good supplement. The consumption of 1 kg of the fruit could supply the 25 % of the needed RDA.

The RDA for vitamin B<sub>6</sub> (pyridoxine) in adults is 1.3 mg/100g (Food and Nutrition Board, 2015). The vitamin B<sub>6</sub> content of Palmyra fruit obtained in this research is 3.5 mg/100g. This implies that 100 g of the fruit only if consumed is capable of supplying the body with about three times the RDA requirement. Mission and Clean (2015) reported that a table spoon of Palmyra jaggery contains 222% of the adult's RDA for vitamin B<sub>6</sub> which is 2.886mg/100g. Bailey (2015) also reported that the jaggery contains a wealth of vitamins and minerals including iron, vitamin B<sub>6</sub>, calcium, potassium and vitamin B<sub>12</sub>.

**Table 1:** Results for Vitamin A (Retinol), Vitamin B<sub>1</sub> (Thiamine, Vitamin B<sub>2</sub> (Riboflavin) and Vitamin B<sub>6</sub> (pyridoxine) With RDA and results from Literature.

Type of Vitamin	Wavelength $\lambda_{\max}$ nm	RDA mg/100g	Results obtained per 100 g	Results obtained from literature
A (Retinol)	335	700	8.89 ± 0.03	9.89 µg/100g (Perberton, 2005)
B <sub>1</sub> (Thiamine	747	1.1	0.00	0.00 (David and Johnson, 1987)
B <sub>2</sub> (Riboflavin)	445	1.2	0.03 ± 0.006	0.02 (Mission and Clean, 2015)
B <sub>6</sub> (pyridoxine)	465	1.3	3.5 ± 0.2	2.89 (Mission and Clean, 2015)

The results for the elemental determination of the minerals and some heavy metals as shown in Table 2,

**Table 2:** Result for elemental analysis of the minerals and some heavy metals.

Elements	RDA mg/kg(for adult) (Food and Nutrition Board, 2015)	Concentration mg/kg
Na	2300	12000 ±0
K	4700	8500 ±0
Ca	100	74.2 ±13.8
Mg	400	850.2 ± 42.8
Mn	448.5	262.4 ± 18.8
Fe	11	18.53 ±25
Zn	40	25.8 ±0.14
Cu	0.9	2.46 ±2.8
Cd	0.04	0.00 ± 0.00

Sodium in the fruit has the highest concentration 12000 mg/kg which is very high compared to the RDA of sodium 2300 mg per day and good for our body system.

The RDA for sodium is the intake level of what you should be getting from your daily diet. In small amounts, sodium is essential for normal nerve and muscle functioning. It is also required for the proper balance of fluids in your body. Too much sodium in diet can result in a sodium build up in the blood stream. If left untreated, high levels of sodium can lead to many diseases such as high blood pressure, heart disease, stroke and kidney disease. The high

level of sodium in the fruit indicates that people suffering from high blood pressure is at risk if they consume the juice.

The concentration of potassium in the fruit is 8500 mg per kg which is almost twice that of RDA of potassium 4700 mg per day in adult and 5100 mg in pregnant and lactating mothers. Potassium is the most abundant intracellular cation and an essential nutrient that is present naturally in food and available as a dietary supplement. It is also present in all body tissues and is required for normal cell function because of its role in maintaining intracellular volume and transmembrane electrochemical gradient (Stone *et al.*, 2016). Insufficient potassium intake can increase blood pressure, kidney stone risk, bone turnover etc. and severe potassium deficiency can cause hypokalemia (Preuss *et al.*, 2012 and Viera *et al.*, 2015).

The RDA for calcium is 100 mg per day in both male and female while the concentration in Palmyra fruit is 74.2 mg/kg. This result is slightly lower than the recommended intake in adult and there is need for food richer in calcium (milk) to be taking alone with the fruit. Calcium ion place a vital role in many, if not most metabolic process, neuromuscular function, enzymes mediated process and blood clotting as well as providing rigidity to the skeleton (Forbes, 1987). In adults the rate of calcium absorption from the gastrointestinal tract need to match the rate of its losses from the body if the skeleton is to be preserved, in children and adolescent an extra input is needed to cover the requirement of the skeletal growth.

The adult RDA for magnesium in male is 400 mg per day, in female 320 mg per day and 350 mg per day in pregnant women. The concentration of magnesium in the fruit is 850.2 mg which is higher than that of RDA therefore, the consumption of 1 kg of the fruit can give the require dosage of magnesium in a day. The human body contains about 760 mg of magnesium at birth approximately 5 g at age 4-5 month and 25 g when adolescent (Widdowson *et al.*, 1951). Magnesium is a mineral that is crucial to the body's function. Magnesium helps keep blood pressure normal, bones strong and the heart rhythm steady. Magnesium supplement often causes softening of stool.

The concentration of manganese is 262.4 mg/kg of the fruit sample while the RDA of the trace mineral is about 448.5 mg. Manganese is necessary for healthy bone structure, it is a component of several enzyme systems, including manganese specific glycosyltransferases and phosphoenolpyruvate carboxykinase. Manganese deficiency has not been conclusively documented, although one experimental case in a volunteer resulted in transient dermatitis, hypocholesterolemia, and increased alkaline phosphatase levels. Manganese toxicity is usually limited to people who mine and refine ores, prolonged exposure causes neurologic symptoms resembling those of Parkinson or Wilson disease (Larry, 2017).

The concentration of iron in the fruit sample is 18.53 mg/kg of the fruit. This shows that the fruit has a high iron content. The RDA of Iron in adult male (14-18 years) is 11 mg, 19-50 years is 8 mg and in female (14-18 years) is 15 mg, 19-50 years is 18 mg. This shows that consuming 1kg of the fruit alone can supply what an adult needs per day. The RDA for iron while in pregnancy and lactating mothers is 27 mg and 10 mg respectively, this means that the consumption of the juice alone could meet the need of both pregnant and lactating mothers.

The concentration of zinc in the fruit is 25.8mg/kg which is low compared to the RDA of 40mg/day at the recommended upper limit in adults. Zinc deficiency in children causes impaired growth, impaired taste (hypogeusia), delayed sexual maturation and hypogonadism in both children and adult. Manifestation also include alopecia, impaired immunity, anorexia, dermatitis, night blindness, anemia, and impaired wound healing. The treatment of zinc deficiency consists of elemental zinc 15 to 120mg ones a day until symptoms and signs resolve. The zinc content of the fruit is very low, the fruit would have to be fortified before it could meet the RDA

The concentration of copper in the fruit 2.46mg/kg and the RDA of copper 0.9mg and an upper limit of 10mg per day. Copper functions as a component of enzymes in iron metabolism. Metabolism of copper in humans relies on the intestine for control of homeostasis as the capacity for renal copper excretion is limited. Nearly two thirds of the body copper content is located in skeleton and muscles, but studies with stable isotopes have shown that the liver is a key site in maintaining plasma copper concentration (Olivares and Uavy, 1996; Turnland *et al.*, 1999). The biochemical role for copper is primarily catalytic, with many copper metal enzymes acting as oxidases to achieve the reduction of molecular oxygen. Many copper metal enzymes have been identified in humans (Harris, 1997). Copper absorption occurs primarily in the small intestine. Some absorption may occur in the stomach where the acidic environment promotes copper solubility by dissociation from copper containing macromolecules derived from dietary sources (Turnland, 1999). Copper deficiency in humans is rare but has been found in a number of special conditions. It has been observed in premature infants fed milk formulas, in infants recovering from malnutrition associated with chronic diarrhea and fed cow's milk (Shaw, 1992). Dangers exceeding the upper limit are gastrointestinal distress and cure damage.

### **Conclusion**

The study revealed that Palmyra fruit contains Vitamin A, B<sub>2</sub> and B<sub>6</sub> with the following quantities 8.89 ± 0.03 µg/100g, 0.03 mg/100 and 3.50 mg/100g respectively while it contains no vitamin B<sub>1</sub>. The fruit is very rich in vitamin B<sub>6</sub>, consumption of 100 g alone can supply the body with about three times the RDA.

The result obtained from the elemental analysis using AAS shows that the fruit contains a good appreciable amount of macro and micro elements. Among the macro elements, sodium has the highest concentration followed by potassium, magnesium and calcium, recorded as 12000 mg, 8500 mg, 850.2 mg and 74 mg/kg dry weight respectively of the fruit. Similarly the micro elements manganese, iron, copper and zinc were recorded as 262.4 mg, 185.3 mg, 24.6 mg and 2.58 mg/kg of the dry weight of the fruit. Cadmium although very poisonous was found to be absent in the fruit. It could be concluded that the consumption of this fruit should be encouraged considering the rich macro and micro element present.

**Recommendation** It is recommended that some of the vitamins not determined in this research together with the anti-nutritional test be conducted for a positive decision on the consumption of the fruit.

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## INDUSTRIALIZATION AND EMPLOYMENT IN A RECESSED ECONOMY: THE CASE OF NIGERIA

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### Abstract

*Nigeria as an emerging and recessed economy, creating job opportunities is one major macroeconomic goals through industrialization. However, industrialization in Nigeria is an ongoing process through which firms are induced through macroeconomic policies to acquire and deepen manufacturing capabilities. The imperatives of industrialization in Nigeria cannot be overemphasized, especially as a recessed economy. If Nigeria must speedily move out of the current state of high unemployment and avert its effects such as kidnapping, bunkering, cultism, street thieves, thuggery, and militancy – industrialization is the key. There is a positive multiplier of macroeconomic policies and industrialization. A decrease in the real interest rate might positively induce firms, investors, to increase planned investment. The authors argued that a privately established and managed export oriented Conventional Crude Oil Refinery of one hundred-thousand-barrel capacity (100,000 bpd) could create employment to ten thousand (10,000) workers, which could reduce unemployment in Nigeria. Therefore, this paper discussed the imperatives of industrialization and employment generation in Nigeria. Industrialization plays a key role in economic development such as diversification of the economy – making more goods and services available to households, firms and government; training and development of skilled personnel; increased modern sector employment; technological development; aids expansion in infrastructure – roads, electricity, etc.; boost to agriculture – industries uses agricultural products as its raw materials; self-sufficiency and raising the standard of living. The government has a major role to play through appropriate policy implementation towards encouraging industrialization. The findings of this study is in agreement with the Keynesian postulation that government intervention in stimulating the economy is necessary to move out of recession and create desired job opportunities, thereby, reducing unemployment level in Nigeria. Consequent on the above, the study recommends that there should be interplay of fiscal and monetary policy instruments in achieving the desired macroeconomic goals through industrialization.*

**Keywords:** *Employment, Fiscal Policy, Industrialization, Monetary Policy, Nigeria, Unemployment.*

## **Introduction**

It is a common knowledge that the level of unemployment is steadily on the increase as more graduates get into the labour market, thereby constituting economic quagmire. It is imperative of government at all levels to conceptualize, formulate and implement result oriented policies geared towards job creation and macroeconomic stability, with a view to reducing the level of unemployment. One of such steps towards job creation is by industrialization through fiscal policy such as government spending and taxation. There is a nexus between government policy (fiscal) and industrialization. Fiscal policy is concerned with action of the government to spend money, or to collect money in taxes, with the purpose of influencing the condition of the national economy (Tom-Ekine, 2014).

Fiscal policy is bi-dimensional. It could be expansionary or contractionary. Fiscal policy is expansionary when government expenditures are increased and taxes reduced and contractionary when government expenditures reduced and taxes increased. Thus, expansionary fiscal policy is needed to combat the ills of unemployment and hence create employment for the populace (Onwuka, 2010, and Obayori, 2016). The persistent increase in unemployment means that estimates of more than 70 per cent of Nigerians live in poverty. This calls for the need to use the instruments of fiscal policy, particularly, government expenditure and taxation to create employment in Nigeria in order to drive the economy towards sustainable growth (Gbosi, 2015 as cited in Udeorah, Obayori and Krokeyi, 2017). Olayemi (1976) posits that the agricultural sector provides employment for about 67 per cent of the active population.

Agriculture covers crop production, livestock, fishery, forestry and wildlife. Despite the growing importance of petroleum, Nigeria is essentially an agrarian economy with agriculture accounting for a significant share of the GDP as well as providing employment for the bulk of the labour force. With very little assistance from government, Nigerian agriculture was able to provide adequate food for an increasing population, raw materials for a budding industrial sector, increasing public revenue and foreign exchange for government and employment opportunities for an expanding labour force before the decade of the 1960s. In 1960, agriculture accounted for about 70 per cent of the employed labour force (Angaye G.S 2016:99) Abayomi 1997 sited in Tombofa S. S., 2005 Niger Delta Economic Review Vol. 1, "Agriculture comprising of crop production, livestock, forestry and fishing is a prominent activity sector in the Nigerian economy. Prominent attention is given to the agricultural sector in any discussion of the structure as well as the development of the Nigerian economy".

Nevertheless, little attention has been given to the agricultural sector in Nigeria since the early 1970s as a result of the emergence of the oil sector as a major revenue earner for the federal government and a leading source of Nigeria's foreign exchange earnings. Yet the agricultural sector, among others, feeds the teeming population and provides some of the necessary raw

materials for the industrial sector (Krokeyi, 2016). Africa continues to be the only continent yet to experience both agricultural and industrial revolutions. Between 1965 and 2005, the sub-Saharan Africa (SSA) manufacturing value added stagnated, and was around 15 per cent of Gross Domestic Product (GDP), which is half what the value of manufactured products has been in East Asia and the Pacific countries since the 1970s (UNCTAD, 2008).

It is important to state that Africa's primary productive sector is generally characterized by low labour productivity, low capital intensity, low output productivity, and low growth which is a clear condition of the "vicious" circle phenomenon that has posed a challenge to rapid socio-economic growth, poverty alleviation, and industrialization. Most African countries failed to develop manufacturing industries because governments employed state-owned enterprises and import substitution policies to expand manufacturing. Some countries that have pursued import substitution strategies have done so at the expense of technical innovation, and competitiveness, given the fast development in global production. In extreme cases, conditions for progression towards higher production frontiers have been hindered as a result of this and stalled competitiveness (Chandra, Lin and Wang, 2012).

The lack of an industrial sector in a region or a country is widely seen as a major handicap in improving that region's or country's economy, and pushes many governments to encourage or enforce industrialization. Therefore, if Africa is to achieve a rapid and high growth rate of about 10 per cent or more, and be able to significantly address its pressing development challenges and priorities of ensuring food security, increasing gainful employment, reducing poverty, increasing trade, improving living standards among others, then it must urgently expand, diversify and transform its productive base beyond its largely traditional primary sector. This, according to the standard economic growth and development process, can only be attained if the continent pays greater attention to and places emphasis on industrial policy and industrialization (with manufacturing at the core) as an engine of economic growth and development. Industrialization means improving economic activities in a particular place or country through the use of modern technologies in such industries such as construction, mining, transport and manufacturing sectors. Some industrial cities in Nigeria are: Ikeja, Kano, Kaduna, Onitsha, Aba, and Port Harcourt (Kemgbara and Tombofa, 2007: 133).

The imperatives of industrialization in Nigeria cannot be overemphasized, especially as a recessed economy. Unemployment in Nigeria has become a hydra headed monster that is affecting the economy and its society. According to the Bureau of Statistics, 38 per cent of the employable age is unemployed and 65 per cent of Nigerian youths face unemployment as at September 2016. If Nigeria must speedily move out of the current state of high unemployment and avert its effects (criminality such as kidnapping, bunkering, cultism, street thieves, thuggery, and militancy), industrialization is the key. Therefore, this paper addresses the imperatives of industrialization and employment generation in Nigeria and makes relevant

policy recommendations. The paper is further subdivided into literature review, methodology, conclusion and recommendations.

## **Literature Review**

### **Role of Industrialization in Economic Development**

Industrialization is somewhat synonymous with economic development due to its influence on economic activities, thereby creating job opportunities for the unemployed that would eventually bring about economic development in the long-run. That is why the role of industrialization in economic development cannot be neglected. According to Kemgbara and Tombofa (2007:134), industrialization plays a key role in economic development such as diversification of the economy - making more goods and services available to households, firms and government ; training and development of skilled personnel; increased modern sector employment; technological development; aids expansion in infrastructure - roads, electricity, etc.; boost to agriculture - industrial uses agricultural products as its raw materials; self-sufficiency and raising the standard of living.

### **Challenges of Industrialization in Nigeria**

Nigeria, like any other developing economy is not without challenges in her quest for industrialization. Again, Kemgbara and Tombofa (2007: 135-136) identified some obstacles to the establishment of industries, these include inadequate infrastructural facilities - electricity, roads, communications, etc.; inadequate technology due to illiteracy and ignorance; inadequate capital; limited entrepreneurial/managerial ability; lack of co-operative spirit among entrepreneurs; market limitation due to low incomes; external competition; inadequate government support; poor infrastructural facilities like electricity, good roads, communications, etc.; high taxes discourage investment; inadequate raw materials. If Kemgbara and Tombofa's argument is anything to go by, then, the government has a major role to play through appropriate policy implementation towards encouraging industrialization.

### **Multiplier of Macroeconomic Policies and Industrialization**

There is a positive multiplier of macroeconomic policies and industrialization. Investment and exports can be enhanced for several reasons. A decrease in the real interest rate might positively induce firms, investors, to increase planned investment. The authors argued that a private established and managed export oriented Conventional Crude Oil Refinery of one hundred thousand barrel capacity (100,000 bpd) could create employment for ten thousand (10,000) workers, which could reduce unemployment in Nigeria. They further argued that such capacity refinery could employ about one thousand, six hundred (1,600) workers during construction phase, depending on the technique - labour intensive or machine. Labour intensive technique could employ three thousand, two hundred (3,200) workers, while machine could employ one thousand, two hundred and sixty (1,260) workers, spin-offs not

inclusive. Then, one can imagine the number of workers to be employed during production stage.

In a business cycle turning points, the economy moves from expansion to recession or from recession to expansion. The forces that bring business cycle turning points are the swings in autonomous expenditure, such as investment and exports. It, therefore, behooves government to incite especially those in the oil and gas who have operational crude oil licenses and firms in other sectors of the economy to achieve a positive multiplier.

### **The Keynesian View and Employment**

The popular Keynesian theory of employment or income posits that increase in government expenditure and the reduction in tax rate would in the long run bring about reduction in the level of unemployment and create substantial employment opportunities in an economy. The Keynesian theory of employment indicates the functional relationship as:

$$Q = f(K) \dots\dots\dots(2.1)$$

Where; Q = the rate of employment,  
K represents the government expenditure.

Keynesian macroeconomists believe that left alone, the economy would rarely operate at full employment and that to achieve and maintain full employment, active help from fiscal policy and monetary policy is required. They based their views on the forces that determine aggregate demand and short-run aggregate supply. Therefore, they call for fiscal and monetary policy to actively offset changes in aggregate demand that bring recession, stimulating aggregate demand in a recession, full employment can be restored.

From the above functional equation, government can reduce unemployment through it expenditure. The role of government in bringing about massive industrialization cannot be overemphasized as industrialization leads to positive economic growth, full employment, price stability, etc, which is what the economy needs to move out of recession.

### **Empirical Literature**

Yeung, Liu and Dickson (2004) investigated the impact of trade on labour demand and found that there is a positive but small impact. They also averred that trade had little impact on wages and the distribution of income, but that foreign owned and export-oriented firms paid higher wages.

Kletzer (2004) reviewed some studies that provide a rich description of trade-displaced workers in the United States for the period 1979 to 1999, and observed that manufacturing industries were high import-competing and were characterized by an increased import share

exceeding 13% points. He concluded that the dramatic increase of U.S. imports has led to trade-related job losses.

Chakraborty and Nunnenkamp (2008) used Co-integration and Granger causality approach to examine the relationship between foreign direct investment (FDI) and economic growth in India. They found that FDI and output are co-integrated in the long-run in, but output growth has a higher Granger Causality impact on FDI.

Spieza (2004) formulated and estimated a model in which employment was a function of exports, import and non-tradables to examine the effect of trade on employment. He found that there is no significant relationship between FDI and employment. Olayinka (2006) investigated and found that there is a positive relationship between openness of the economy and employment level in Nigeria.

In the same manner, Tavera (2007) tested the role of FDI in the creation of employment, using panel data of ten subsectors of the manufacturing sector for the years 1980-2003, divided into three sub-periods of 1980-1989; 1990-2000 and 2001-2003. The result of the study revealed that FDI had a positive though very small effect on the creation of employment.

Aryeetey (2006) observed that the slow growth of formal employment was one of the features that have characterized Ghana's reform efforts of the last two decades. He further noted that employment increased from 208,000 in 1981 to 464,000 in 1985 and thereafter declined steadily up to 186,300 in 1991. However, the empirical result analysis showed a positive relationship between globalization proxied by the degree of the economy and employment.

In the same vein, Elhiraika (2008) using data from 36 African countries examined the key determinants of manufacturing share in aggregate output and its relationship with real GDP growth and growth volatility and found that an increased share of manufacturing in total output has the potential to raise GDP growth and reduce growth volatility and thus recommended that African countries should design and implement effective industrial policies to promote manufacturing and other innovative activities as a means to boost economic transformation and achieve economic and social development goals, including employment creation and poverty reduction.

**Table 1:** SWOT Analysis of Nigeria in The 21<sup>st</sup> Century.

STRENGTHS	WEAKNESSES
<p>Rich minerals, oil and gas deposits            Varieties of flora and fauna            Natural habitat (rain forests)            Unutilized productive spaces            Rich cultures and creative communities            Cheap labour and raw materials            Blessed agricultural resources            Available market (domestic and international) market</p>	<p>Weak local (domestic) market            Dearth of highly skilled labour            Weak and unproductive States            Lack of strategic planning            Step-child attention towards policy implementation            Market instability            Lack of improved information and communications technology            Negative terms of trade            Gender inequality            Poor infrastructure            Autocracy in democratic leadership            Lack of transparency and accountability of elected leaders            Insignificant level of research and development            Political instability            Huge external debt            Sustained balance of payments deficits            High level of corruption            High level of unemployment            Inflated insecurity            Lack of genuine political will on the part of previous governments.</p>
OPPORTUNITIES	THREATS
<p>Value chain in manufacturing and services sector            Acquisition of modern knowledge and skills            Mass employments which would reduce Youth Restiveness and vices such as; Kidnappings, illegal Bunkering, Militancy, Cultism, Thuggery, Burglary, etc.            Industrialisation of the region.            Empowerment programmes through skill acquisition/ training.            Power (Electricity) generation.            Agricultural Development Programmes.            Inflow of foreign capital.            Enhanced economic activities and provision of social amenities.            Availability of Petroleum Products for local consumption and the sub-regional markets.</p>	<p>Competition with Newly Industrializing Countries (NICs)            Dependence on external agencies and markets            Activities of syndicates of Oil products importers.            Personnel and equipment security.            Political instability            Government policies            Foreign exchange</p>

**Table 2:** Paradigmatic of Economic Development

Paradigm	Explanation	Major Initiators
Arthur Lewis' two-sector economic growth or structural change model (1950s)	Economic growth would be achieved through capital formation (industrialization, urbanization, technological transformation of agriculture).	This model neglected agriculture, the backbone of Africa's economy, as a strategy for development and also neglected African knowledge assets and experience in its design. It contributed to the massive migration of rural people into urban areas.
Structural institutionalism (Prebisch-Singer Thesis)	There was a secular decline in the terms of trade between agricultural and industrial commodities, and the desire to reduce economic dependence led to a development strategy that favoured import-substitution or an inward-looking development policy.	A number of African countries that developed an inward-looking industrialization strategy experienced huge balance of payments deficits. In addition, incentives favouring capital, high effective protection of assembly type industries, and direct controls over prices and foreign exchange have tended to introduce distortions and to support inefficient industries while discouraging agricultural and export production.
Growth-with-Equity, basic needs approach, participatory development (1970s)	Satisfaction of basic needs and growth with equity (for example, GDP per capita was replaced by Physical Quality of Life Index - literacy, life expectancy and infant mortality). The proponents of this development approach focused on agriculture-first development and a new international economic order, and viewed grass-roots participation as a means of poverty reduction and self-actualization.	Though favoured by some progressive leaders of Africa, it could not be implemented because of the oil crisis of the 1970s and the subsequent world recessions. This hurt mainly the non-oil-producing countries of Africa, because although prices of some products (for example, cocoa and coffee) increased, it was offset by the high oil prices. However, the deep recession in the first half of the 1980s was due to rising oil prices, the Sahelian drought, and the high cost of external borrowing.
Neoclassical (market-friendly) paradigm led by the World Bank (1980s), and the New Growth (endogenous) Theory of Paul Romer and Robert Lucas (1990s)	Neoclassical theorists argued that the lack of economic growth in the Third World was due to poor resource allocation and state intervention. The central tenets of development policy in the 1980s therefore shifted to the adoption of the following strategies: (a) implementation of competitive free markets; (b) privatization of state-owned enterprises; (c) promotion of non-traditional agricultural products for exports; and (d) creation of conducive	Though Structural Adjustment Programmes (SAPs) were to restore macroeconomic stability and eventually generate sustained economic growth, from 1980 to 1985, "the real per capita GDP for the sub-Saharan Africa region declined by nearly 20 per cent; export earnings dropped by about 40 per cent; import purchases fell by about 40 per cent; and the region's external debt, which stood at \$6 billion in 1970, reached an alarming figure of



	<p>environments for foreign direct investments. Thus, in order to borrow funds for internal and external macroeconomic balance from the IMF and the World Bank, sub-Saharan African countries were required to undergo structural adjustment programmes (SAPs). After following the prescribed stabilization and structural adjustment programmes, many African countries experienced little or no growth. Thus, the poor performance of neoclassical theories in explaining the sources of long-term economic growth led to the concept of endogenous growth or the new growth theory. “Models of endogenous growth suggest an active role for public policy (unlike the neoclassical theory, it advocates for government intervention) in promoting economic development through direct and indirect investments in human capital formation and the encouragement of foreign private investments in knowledge intensive industries. For example, Finland and Ireland achieved tremendous growth because they focused on high-tech industries and intellectual development, such as computer software and telecommunications.”</p>	<p>more than \$120 billion. The economic crisis confronting these countries included deteriorating roads, impoverished health facilities, falling educational standards, idle factories, growing unemployment, and falling nutritional intakes.” Though challenged by the United Nations Economic Commission for Africa, the World Bank and the Regional Bureau for Africa of the United Nations Development Programme concluded that from 1985 to 1990, those sub-Saharan Africa regions which implemented SAPs were doing better than countries which did not, in terms of growth in the short run (but the growth dissipated quickly, did not increase domestic savings, neither did it protect the poor from bearing undue hardships.</p>
<p>Sustainable Economic Development (United Nations) Since the Rio Earth Summit in 1992, numerous environmental plans (such as National Environmental Action Plans – 13 in the 1990s)</p>	<p>The sustainable economic development paradigm acknowledges that if development is to be sustainable, the environment needs to be protected. Thus, sustainable development leads to sustainable activity that meets the needs of the current generation (intragenerational equity) without depleting the supply of resources for future generations (intergenerational equity).</p>	<p>Since the Rio Earth Summit in 1992, numerous environmental plans (such as the National Environmental Action Plans – NEAPs) have been undertaken by various African countries, and a number of studies have been conducted by the African Development Bank. Nonetheless, because of lack of adequate financial resources and major economic distress, exacerbated by SAPs, so far environmental needs have not been systematically incorporated into Africa’s economic development paradigms.</p>

**Source:** AdjeiAko and Akrofi Victor.

**Table 3:** Experiences of Some Industrialized Economies

Period	Priority activities	Main instruments
1960 - 1973	Exports in general - key sectors - labour- intensive manufactures.	Import protection; Export subsidies including duty drawbacks; Subsidized credit allocations; Export targeting.
1973 - 1980	Manufactured exports Firms needing restructuring Small and medium - enterprises High technology activities now priority.	Import protection, export subsidies including duty drawbacks, subsidized credit allocations, export targeting; Widespread use of policy loans to channel funds to priority firms and sectors; Investment incentives through tax credits.
1980 - 1990	Heavy and chemical industries Priority sectors - steel petrochemicals, nonferrous metals, shipbuilding, electronics and machinery Priority firms - selected large enterprises.	Phased import liberalization; Ending of policy loans; Government influence over allocation of credit; Investment incentives for research and development; Easing of restrictions on FDI.
1990 onwards	Private sector-led development. Restructuring of chaebol after 1997 Crisis.	Financial sector liberalization; open capital account.
Period 2. China, Taipei	Priority activities.	Main instruments.
1953 - 1957	Import substitutes - key sectors - textiles, clothing and other labour-intensive manufactures.	Import protection through tariffs and import quotas.
1958 - 1972	Export promotion/substitution key sectors - labour-intensive manufactures particularly garments, consumer electronics. Some import substitution in intermediates - basic metals and chemicals.	Unified competitive exchange rate; Rebates on import duties; Tax credits; Subsidized loans; EPZs - encouragement to FDI; Export targeting; Import protection through tariffs and import quotas.
1973 - 1980	Import substitution of intermediate goods and capital plus exports Key sectors - petrochemicals, steel, ship building, automobiles, machine tools, electrical machinery, consumer electronics.	Public investment in state enterprises; Tax credits; Policy loans; Import tariffs; Rebates; Selected protection.
1981 - 1990	High technology activities and exports. Strategic sectors - information technology, machinery, precision instruments, biotechnology, electro-optics, environmental technology.	Trade liberalization; Policy loans for strategic industries; Tax credits; Public investment in infrastructure and research facilities; Science parks; Encouragement to FDI.
1990 onwards	Private sector-led development.	Financial liberalization; Interest rate decontrol ;Ending of policy loans; Public sector for science and technology; Encouragement to FDI Investment in education.
Period 3. Thailand	Priority activities.	Main instruments.
1960 - 1971	Focus on replacing imports with domestic goods.	Import Substitution; Industrialization Laws for tariff protection and domestic industrial investment promotion enacted; Preferential treatment given to imports of capital goods, intermediate and raw materials; Preferential conditions for priority industries. For example 5 year tax holiday; duty relief on machinery imports and raw materials.

PROCEEDINGS OF THE 5TH INTERNATIONAL CONFERENCE ON SUSTAINABLE DEVELOPMENT STRATEGIES IN AFRICA

**Theme:** Regional Cooperation and Sustainable Development Strategies in Africa

1972 - 1976		Export promotion; Use of tax credits for tariff payments; Duty drawbacks for export production; Export financing.
1977 - 1982	Promotion of heavy industries producing intermediate and capital goods; Agro-industry and SMEs.	Import substitution - focus on protection of heavy industries producing capital goods and intermediate goods; Parallel development of exports East Coast Development Programme as a large scale regional plan.
1983 - 1996	Deregulation in the automobile and textile sectors.	Export Promotion through FDI 100% foreign ownership supported Industrial estates developed and designated EPZ status Investment encouraged in specific areas - in line with division of country into 3 regions.
Period 4. Malaysia	Priority activities.	Main instruments.
1957 - 1967	Few imposed limits on import volumes. Focus on promoting domestic consumer goods to reduce import dependence.	Import substitution; Set selectively low import tariffs.
1968 - 1979	Promotion of exports - manufactures; Rubber and tin related.	New Economic Policy (Bimuptra), 1969 focusing on diffusing ethnicity, hence restructure society to eradicate disparity among communities/ regions. Primary policy focus was on equity rather than efficiency. Export promotion Enactment of Investment Incentive Law - 1968 Development tax - 5% of profits 3% excess profits tax 40% corporate tax 1971 - Law of Freed Trade Zones - typical EPZ regime.
1980 - 1985	Shift economy from dependence on rubber and tin to palm oil and crude oil Investment shift to steel, cement, automobiles, and chemicals.	2nd Phase of import substitution revisited.
1986 - 1997	Designation of 12 key sectors Non-resource industries - electric/electronic manufactures, textiles/garments, machinery, transport equipment and steel Resource industries - wood processing, rubber manufacturing, palm oil processing, food processing, chemicals/petro chemicals, nonferrous metals and non-metal manufactures.	Export orientation through promotion of FDI New export promotion law shifted priority to efficiency Authorization of wholly owned foreign subsidiaries Deregulation of FDI and privatization of state entities.
Period 5. China	Priority activities.	Main instruments.
1979 - 1986	Government developed "pillar industries" - by merging and reorganizing state enterprises in the automobile, machinery, electronics, petrochemical and construction industries.	Planned economy. Government controlled all production, distribution and consumption. Focus mainly on resolving insufficient supply. Industrial structures adjusted - switch from heavy industries to light industries. Production allocation coupons issued to influence supply capacity. Government intervened to encourage technical innovation. Limited effects/results due to government's inability to provide financial support.
1986 - 1992	Development of basic sectors - infrastructure Establishment of Industrial Policy Department in the National Planning Committee in 1988 Leading industries selected in 1989.	Term "industrial policy" used for the first time in 1988 Structural adjustment - to balance demand and supply by reducing high supply capacity in industry Market economy Attraction of foreign TNCs.

PROCEEDINGS OF THE 5TH INTERNATIONAL CONFERENCE ON SUSTAINABLE DEVELOPMENT STRATEGIES IN AFRICA

**Theme:** Regional Cooperation and Sustainable Development Strategies in Africa

1992 - 2001	Create industries that could serve as a foundation for economic growth. Designated 4 lead industries - automobiles, machinery, construction and petrochemicals; later, service industries such as information technology were added - Industry policy focused on agriculture, infrastructure, pillar industries and services. Pillar industries included building materials, housing, petroleum and automobiles. Textile industry, improved quality in steel industry Increased profitability in the coal industry.	Industrial policy focused on fostering market competitiveness - no discrimination between foreign and local companies. Reform of state enterprises; Introduction of foreign capital; Social progress also targeted. In 1997, 5 major changes to industrial policy were effected: (a) Development of housing (b) Market competition emphasized (c) De-emphasis of state ownership (d) More labour mobility (e) Preferential treatment for SMEs, including creation of a financing department.
2001 and beyond	Financing facilities through state-owned commercial banks encouraged the following sectors: infrastructure, research and development, roads and railways through a "Specific Project Financing" facility.	Policies became more pro-FDI - targeted Economic Development Zones Principle of respecting market competition had emphasis at the expense of government intervention. Government mainly a guiding instrument. Key features of industry policy at this stage. Provision of financing measures (4 state-owned commercial banks supported industry). Projects guaranteed by Government had easier access to finance Tax measures.
Period 6. Mauritius	Priority activities.	Main instruments.
1960 - 1969	Promotion of domestic industries. Main sugar related industries. Attempt to develop domestic manufacturing capacity to reduce dependence on imports.	1964 Import Substitution Industrialization Legislation enacted Offered host of fiscal incentives, and non-tariff barriers to protect domestic producers; Import substituting companies issued with development certificates "DC Companies" - by 1970 only 70 such companies had been created ISI failed to solve economic problems. One jewel components company survived, to date - still exporting to Europe.
1970 - 1979	Massive expansion of export industries; Textiles and clothing sector; Strong backward and forward linkages with the rest of the economy; Tourism sector; Diversification from sugar.	Export Orientation Strategy adopted EPZ Act No 51 of 1970 enacted - creating a free zone Lucrative fiscal and financial incentives offered Massive expansion. Open policy to FDI - guarantees of no nationalization. Private sector given great and unlimited scope and support Solid relationship between government and business. Political stability - a major plus Access to EU market - Lome Convention attracted Asian FDI that had failed to export to the EU market 1971 - 1975 - 4 Year Development Plan fostering social and economic transformation. Government provided incentives to influence resource allocation - contrary to direct control. Focus on providing infrastructure - roads, telecommunications, port facilities, among others.
1980 - 1990s	Strong manufacturing sector with diversity developed EPZ textiles sector - strong momentum Tourism.	Adoption of World Bank/IMF supported structural adjustment. Focus still on exports, but revision of EPZ regime to claw back some revenue Economic stabilization measures.

**Source:** Weiss (2005), Leipzinger, (1997), WB (1993), Dahlman and Sananikone (1997), Kim and Leipzinger (1997)

### **Conclusion and Recommendations**

Nigeria as an emerging and recessed economy, creating job opportunities is one major macroeconomic goals through industrialization. However, industrialization in Nigeria is an ongoing process through which firms are induced through macroeconomic policies to acquire and deepen manufacturing capabilities. The imperatives of industrialization in Nigeria cannot be overemphasized, especially as a recessed economy. Unemployment in Nigeria has become a hydra headed monster that is affecting the economy and its society. If Nigeria must speedily move out of the current state of high unemployment and avert its effects (criminality such as kidnapping, bunkering, cultism, street thieves, thuggery, and militancy), industrialization is the key. industrialization plays a key role in economic development such as diversification of the economy - making more goods and services available to households, firms and government; training and development of skilled personnel; increased modern sector employment; technological development; aids expansion in infrastructure - roads, electricity, etc.; boost to agriculture - industrial uses agricultural products as its raw materials; self-sufficiency and raising the standard of living. The need to adopt a well-articulated policy is required in stemming the problem of low employment. Thus, the findings from the study corroborate Keynes assumptions that increase in government expenditure would be a stimulant to industrialization. This paper recommends that:

- 1) Government should as a matter of priority formulate and implement industrial policies that encourages the private sector/investors;
- 2) Funds realized through tariff protection measures should be religiously utilized for export growth;
- 3) Industrial policy should be designed to respond to the specific developmental challenges Nigeria is experiencing;
- 4) Tackle insecurity, thereby creating conducive conditions for increased FDI inflows, removing anti-investment biases and encourage FDI flows to firms with export potentials;
- 5) Addressing the infrastructural bottlenecks, increasing competitiveness, and improving the business climate by adopting sound infrastructure investment frameworks;
- 6) Enhancing credit availability by strengthening efficiency of financial intermediation; and
- 7) States owned enterprises should be encouraged to improve on the quality of economic institutions.

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## AN OVERVIEW OF BLOCKCHAIN TECHNOLOGY AND THE VALUE ADDED TAX SYSTEM

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### **Abstract**

*The tax authorities have been combating value added tax(VAT) fraud and other VAT related problems for a very longtime, even the auditing of the accounts have not fully resolved the problems of VAT and tax in totality. As a form of advancement in technology, the blockchain algorithm which is a distributed ledger or a public ledger was first introduced as an underlying technology for Bitcoin. But along the line, it was discovered that some problems associated with VAT and other transactional taxes can be eliminated through this network. Some studies emphasized that the blockchain network is a peer to peer or person to person network that makes all transactions traceable, provides transparent and accurate information; a self-auditing system that is useful for tracking corporate fraud and can also help resolve the problems of manual collection and submission of returns; and a system programmed to automatically trigger payment and verify the validity of VAT paid. Although the block chain technology has a lot to offer, at present, it cannot be used for combating VAT fraud and other VAT related issues because of its inherent problems that are yet to be resolved. Therefore, the block chain technology is not an immediate solution for fraud and error detection, VAT calculation/payment, manual collection and submission of returns since the network is not generally accepted all over the world; it contains information of objectionable contents; it is an integral part of the deep web/dark web (a hidden site not open to other search engines) and within a short space of its inception, there has been 51% attacks of the blockchain network which shows that it has been hacked severally to the tune of 51%.*

**Keywords:** *Blockchain Technology, VAT, Bitcoin and Deep Web*

### **Introduction**

VAT is one of the driving factors as well as one of the largest contributions to government budget (Jurgen, 2018). In some countries, it is the sole income and top priority in government budget (Joshi, 2019). For several years, government has been looking for a system that can ensure the efficient collection and remittance of taxes or a network that can make all

transactions traceable; prevent tax fraud/ non-compliance to tax and an automated digital ledger where returns and refunds can be easily recorded.

In a bid to reduce the rigorous work done by the tax authorities, the blockchain technology (which was first introduced in the year 1994 by Wei Dai) was reintroduced in the year 2008 to serve as an underlying support for a particular crypt currency called the Bitcoin. That is, since the year when the bitcoin was introduced, the blockchain was also silently reintroduced because blockchain cannot exist without bitcoin since it is the underlying technology for the coins.

As time went by, it was discovered that the blockchain network can also be used for even greater things. As such, the first set of blockchain activities were related to indirect taxes such as VAT, sales tax, custom and exercise duties (Bulk, 2018). That was why Albert-Muller (2019), defines the blockchain technology as a distributed digital ledger that can be programmed to record not just financial transactions but virtually everything of value. While Joshi (2019) added that network has come a long way because it is a network that makes all transactions traceable (ownership of assets), and all applicable taxes like VAT can be calculated. Value added taxes (VAT) are indirect charges on the consumption of goods and services in the economy (SARS, (nd)). It can also be viewed as value addition at different stages of manufacturing and distribution of goods and services (Sinha & Agarwa, 2011).

From the above definition of VAT, it shows that it is basically the amount that is added to the price of goods or services because it is only when value is added that a tax is applied. Since the year VAT was introduced in Nigeria, the tax system just like any other system has passed through a lot of problems, some of which are lack of payment by industries, fraudulent activities, difficulty in collection of VAT or VAT charges on bank services, etc. (Juwah-Ogboi, 2018). In relation to that, it is believed that blockchain algorithm is an interesting technology that has come to resolve the numerous problems encountered in the tax system. It is a network that cannot be ignored, and governments of many countries are trying to introduce it in their countries while so many large corporations have already embraced the technology because it simplifies tax system and speed up tax processes. The burden of manual collection, manual verification, validation and submission of returns are all taken up by the blockchain algorithm to reduce the use of paper materials and the rigorous/tiring processes involved. It is also an algorithm that provides clear and transparent information and it can be useful in tracking VAT fraud and to equally find out if VAT has been paid or not (Nicholson & Lynn, 2019). Therefore, the aim of the study is to highlight the place of blockchain algorithm in combating VAT fraud and other VAT related problems.

### **Literature Review**

Warscotte (2018), stated that blockchain is about labeling and tracing flows of VAT money from a taxpayer up to the tax authority. Hence, it is a system that can help reduce fraudulent practices involved in the collection of VAT or taxes because it creates a tamper proof record of transactions where once an item is recorded or a transaction is made, it cannot be altered. This is because it is a virtual ledger of information that is replicated across computers that are joined, in a peer to peer network or it is a chain of blocks which are linked to each other (Frankowski, Baransk & Bronowska, 2017).

Another major problem of VAT as stated above is the difficulty in collection as many business owners and even government establishments fail to comply with the rules and regulations of VAT system. And with this kind of practice, funds are trapped in between because so many of these companies do not pay while others pay and after a while discontinue.

But with the introduction of the distributed ledger, fraud and error detection have become easy because blockchain is a transparent system that whenever data is updated, everyone or member in the network views the chain history of events simultaneously. Again, the block chain ledger records all transactions accurately and timely and can provide ready evidence to support the collection and payment of VAT to the last amount.

Some studies emphasized that with this kind of technology, the right amount of tax will be collected because data is updated for everyone in the network simultaneously. That is, with blockchain, VATs are efficiently collected because information is processed immediately unlike in the traditional system where things on VAT, or taxes have to take days, or sometimes weeks or months to be finalized (Albert-Muller, 2019).

In furtherance to that, bitcoin in relation to the blockchain is a decentralized digital currency or it operates a decentralized system of government that is not regulated/controlled by any central authority like the central banks that we have today (Rose, 2015). Hence, the blockchain system operates a digital contract system/smart contract/blockchain contract which is a system that when an agreement is reached between two parties, the system self-executes itself without the help of any regulatory authority (decentralized system) (Rose, 2015). Joshi (2019) posits that the smart contract can be used to automatically process all kinds of tax payments.

Furthermore, when a transaction is done, the smart contract calculates the VAT immediately and payment is made or the VAT amount is sent to the relevant tax authorities while the no VAT amount is sent to the account of the company involved. This reduces the rigorous process of filling returns and waiting for months for the computational processes to be completed (Frankowski, Baransk & Bronowska, 2017) which makes it difficult for government to track VAT payment and fraud. And if there is any refund, the blockchain smart contract will also

issue refund after all calculations have been finalized. Basically, the smart contract is a system that helps to distribute sales price and any other amount specified. Therefore, if blockchain technology is used for transactional taxes, it will deliver reliable real time information from a chronological chain of data uploaded into the blockcahins to the larger Audience (Jurgen, 2018). This also shows that transactions are conducted on real time (the real time process is where the computer processes data immediately).

Other benefits of the block chain on VAT are shown where the network is viewed as a public ledger (retains history of all transaction) without a central authority, which keeps a list of records in blocks that are secure and traceable (Seco, 2017); and the block chain technology operates a distributed digital ledger where information is not stored in a single server or computer like in the traditional method but is distributed among all members in the information chain (Thornton, 2018). And asa distributed ledger, it makes it difficult for the ledger to be attacked by a cyber-attacker because each copy of the data and chain of blocks have to be attacked simultaneously (Gijsbert, 2018).

In the blockchain technology, the need for auditing of accounts is reduced. This is because the blockchain algorithm is described as a self-auditing system that is transparent and immutable. That is, the system audits itself for any refund in tax, identifies items that are flagged for deletion/payment, and the system is programmed in such a way that it automatically triggers payment and verifies the validity of VAT paid etc. (Collins, 2018).

This shows that the need for performing existing audit procedure is reduced which will greatly reduce the work of the external auditor because ledgers would be easily accessible, transaction well casted and cross checked, hence, reducing estimates and guess work from management (Robin La Quercia, 2018).

### **Methodology**

The study is descriptive in nature; information was sourced majorly from academic journals, review papers, textbooks and other relevant materials using Google scholar.

### **Discussion**

Frankowski, Baranski & Bronowska (2017), emphasized that even with all that the network has to offer, the block chain network is an integral part of the deep web/dark web and the deep web is a hidden site not open to other search engines and an invisible site that encourages illicit activities. They further stated that 47% of the block chain activities are done on the deep web. More so, the network does not only contain information on financial transactions but also information of objectionable contents or illegal contents, politically sensitive contents and child abuse.

The block chain technology in relation to bitcoin has been accepted in about 111 countries out of 251 countries as sampled in [coindance.com](http://coindance.com), which shows that 140 countries have not fully legalized its activities (see appendix 1). Notably, general acceptance is a vital issue when it comes to currency and it is the first and most important characteristics of money. Therefore, where there is limited or no acceptability, there can be no medium of exchange which shows that the information entered into the blocks is unrealistic because all transactions in the block chain network are majorly bitcoin related.

The network has always been referred to as “the unhackable network” by all bitcoiners which goes to show that the network has never been hacked. But as at 2019, there have been 51% attacks of the blockchain network or it has been hacked severally to the tune of 51%. This means that within a short space of its inception, it has been attack severally which is dangerous for the network. Again, it is equally referred to as an immutable system because transactions in the network are irreversible even where some money was erroneously remitted to a non-existing account or to a wrong business partner, the amount remitted is said to be lost forever (Lanskey,2017). This is done for security reasons and to protect the network from hackers and attackers. But it is to the detriment of the innocent traders or VAT payer who engages in a business only to make profitor without full knowledge of how it works. This also points to the fact that once VATS payments and other transactions have been finalized, errors and mistakes cannot be corrected because there is no central authority to report to. This indeed is risky to undertake and that was why it was frequently stressed that “all CC account owner must have the required facilities for the transaction and must be very sure of the recipient’s details” (Lanskey, 2017).

There are also incidences of double spending where an attacker or hacker gained control over the network and was rewriting the transaction history and changing figures thereby spending the same currency so many times (Orcutt, 2019); and in the year 2010, there was also “the value over flow incidence” where 184.4 billion bitcoins were created out of thin air by a hacker which almost destroyed bitcoin or instead of having only 21million bitcoins in circulation a hacker created 8,784 times more bitcoin than ever should have existed(shrem, 2018)etc. engaging in such activity is indeed a dangerous one for a growing economy because even the conventional currency (which has been there for so long) has never been hacked this much. There will always be a problem with this system or network because there is no regulatory authority (it is a decentralized system) to control its affairs, hence arbitrariness will subsist.

### **Conclusion**

VAT assessment, computation and submission by government organizations and other businesses has always been a challenge. The tax authorities have lost huge resources trying to recover or combat tax fraud and evasion. It was in the process of sourcing how best to combat tax fraud and evasion that the blockchain technology was introduced in the year 2008.The

blockchain technology which is a distributed decentralized ledger was introduced to combat and reduce the problems of VAT and other transactional taxes. The blockchain algorithm is an immutable, transparent, incorruptible and self-auditing system that is designed to speed tax refund processes, verify the validity of taxes paid, discourage the wrong use of VAT rates, ensure real time and smart contract systems, expose VAT evaders, fight VAT fraud, etc. (Bronowski, 2017 et al).

The block chain technology has a lot to offer but at present, it cannot be used for combating VAT fraud and other VAT related problems because of its inherent problems that are yet to be resolved. Therefore, the block chain technology is not an immediate solution for manual collection and submission of returns or VAT assessment and collection since the network is not generally accepted all over the world, including Nigeria; it contains information of objectionable contents; it is an integral part of the deep web/dark web (a hidden site not open to other search engines) and within a short space of its inception, there has been 51% attacks of the blockchain network which shows that it has been hacked severally to the tune of 51%.

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### **Appendix 1**

**Table I:** A Table Representing Crypto Currency and the Level of Acceptance in Various Countries

111 countries out of 251 countries view CC as a legal transaction
10 countries regard it as an illegal transaction
9 countries restrict its usage
24 Countries are neutral about it
97 Countries have no information about it.

**Source:** Coindance.com

## MASS MEDIA AND THE RECENT ECONOMIC RECESSION IN NIGERIA: A SEARCH FOR A VIABLE SOLUTION: STUDY OF KANO STATE RADIO.NIGERIA

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### **Abstract**

*Mass media plays a gigantic role in nation building such as acting as watchdog, interpreter of events, agent of change and gatekeeper in shaping and molding the national conscience of the society. Economic recession affected the industry globally which also manifested in Nigeria. the economic recession had massively affected the viability of Kano State radio, because the station rather than making profit is now operating at a loss, the subvention the station receive from the State government is no longer enough to sustain the station in the area of programmes, payment of casual staff and the general maintenance of the station. System theory was adopted while qualitative methodology was used. Findings revealed that the establishment of many private stations in the state also contributed immensely to the current predicament of the station. The station during economic recession was no longer considered the right channel for information dissemination. Corporate and individual bodies' preferred to patronize many of the private stations for their advert placement rather than approaching Kano State Radio. At that moment, the over ten private stations in Kano State were making huge profits while Kano State radio was seriously feeling the negative impacts of economic recession/slowdown. Findings also revealed that after recession and the change of leadership in the station, new equipment were procured, modern studios were constructed with latest broadcast equipment installed. Base on the above findings the study recommends that Government should increase the amount of funds given to the station. New equipment should be procured for the station so that high productivity could be achieved.*

**Keywords:** *Communication, Mass media, Economic recession, Government*

### **Introduction**

Mass media comprises of newspaper, radio, television and the platform of social media such as YouTube, Facebook, Twitter and many more. It has a tremendous impact on the way of life and attitudes of the people. In addition, the mass media have the capacity and the

responsibility for gathering and dissemination of knowledge, skill, experience and all forms of information that can promote and facilitate socio-economic progress and political consciousness for the development of an individual citizen and the whole nation. Besides, the mass media have the capacity for producing and disseminating information, belief, views, and opinions, ideas and so on in which the people actively and continuously use to help them understand issues and the world in general.

Besides, the need for all citizens in respect of sex, tribe, race, age, and so on, to be educated and enlightened for the development of the society has brought about the necessity for using the media to effectively reach the citizens. Pascal & Chukumekwu (2013) held that media is popular tool for transmitting information to people at a large scale and bring about changes in behavior and the thinking style of the people.

### **Radio broadcast in Northern Nigeria**

Broadcasting in Nigeria started by the foreign service of the British Broadcasting Corporation (BBC) on a trial basis; in the year 1932. This came into being with colonial administration's and the establishment of a re-broadcasting station, the British Broadcasting Corporation (BBC) in Lagos. Pascal & Chukumekwu (2013) argue that broadcasting in Nigeria is traceable to 1932 when the British government established broadcasting the British (BBC)'s "Listening Post" in Lagos and some other strategic places, which are under colonial rule in West Africa; so as to monitor the (BBC) studios in London. The listening post was later transformed into Radio Distribution Services (RDS) in 1936 and was dedicated to the relaying of news coming from BBC studios in London to Nigerian audiences through the distribution service. Also, the content of the programmes has no direct relevance to the primary needs and the general lifestyle of the indigenous audience, since the rebroadcasts were meant to satisfy the listening needs of the colonial masters.

The establishment of Northern Nigeria Broadcasting Corporation with its headquarters in Kaduna in the year 1962; gave birth to more Broadcasting Corporation of Northern Nigeria (BCNN) with both radio and television stations. Equally in 1978, the federal government restructured broadcasting system in the country by taking away the radio section from all the three regions - Western Nigeria Broadcasting Service (WNBS), Eastern Nigeria Broadcasting Services (ENBS) and Broadcasting Corporation of Northern Nigeria (BCNN) and Federal Radio Corporation of Nigeria (FRCN).

Radio Kano was formally established in 1978 when it is handed over by the federal government as provincial station. It went through a lot of metamorphosis as its currently operating on two channels AM and FM. The motto of Kano State radio is "serve the people" and the primary task of the station is to inform, educate and entertain. Kano State radio now has a second channel known as Radio Kano II FM Stereo, it was established in 1986 and

transmission started in 1987. The establishment of the channel is mainly for musical entertainment and revenue generation since the FM system worldwide is mainly used for musical entertainment. The FM channel is the main source of revenue generation for Kano State radio. While the AM mostly produce programs that are more informative and educative in nature, at the moment Kano State radio has 6 departments each headed by either director or deputy director, the departments are admin and general service, programs AM, programs FM, engineering, news and current affairs and commercial services. Kano State radio has its headquarters at No 1 Ibrahim Taiwo Road Kano, which is popularly known as Gidan Bello Dandago, the head offices, houses the studios and one of the FM transmitters. The station has sub stations located at tukuntawa, Jogana and ARTV at Hotoro. At the moment Kano State radio transmits on the following channels

1. Tukuntawa 1549khz
2. Jogana 412meters
3. Radio Kano FM 89.3zkhz
4. Blink 360.72mhz
5. Tukuntawa TX link 96.9mhz

Economic recession on the other side is as old as the history of humanity itself. It dated back to the 3<sup>rd</sup> Century which was the period of a military anarchy also known as Imperial Crisis (AD 235 – 284). This was the period which the Roman Empire came close to the collapse as a result of economic depression, civil crisis, invasion and disease.

Economic recession is a period of decline in economic activity in practical terms, recession is a period of time when a nation's Gross Domestic Product (GDP) decline for at least two consecutive quarters in a quarter to quarter comparison (Mazurek and Metcova, 2013).

The National Bureau of Economic Research (NBER), a well-known economic research organization in the United States see recession as when "a significant decline in economy spreads across the economy, lasting more than a few months to more than a year, normally visible in real Gross Domestic Product (GDP) growth, real personal income, employment (non-farm payrolls) industrial production and whole sale retail sales," (NBER 2010).

But the NBERs definition criticized by many scholars such as Knoop (2015:14) which on his side put the first problem with his own definition as that a lag exists between getting data and making decisions. Output must be falling for at least "a few months," before the NBER will declare a recession, in practice the economy has typically been in a recession for at least six months before it has been officially recognized as one by the NBER. According to Knoop (2015:14) the research that was started in the United States of America in December 2007 was not recognized as recession until a full year after it began. Generally, recession can be caused by two broad factors. Internal (endogenous) and external (exogenous). The endogenous is

usually caused as a result of conflict of ideas, misapplication of economic theory and regulatory negligence or policy inconsistency. According to Wong, (1999). The Asian Financial Crisis of 1997 - 1998 was caused partly by internal factors; banks were lending a broad in pursuit of high profit margin, due largely to slow downs at home and the desire to pursue development without due consideration of economic fundamentals, corruption and structural and policy distortion.

But the external causes of recession have to do with factors that are exogenous to the economy over which policy makers have little or no control. This has to do with natural disaster, climate change, revolution and wars. An agricultural economy could face crop failure resulting in general economic slow-down. Further to the external factor the neoclassical economists are of the view that state interference in the market, labour union, monopolies and technological shocks are external causes of recession, the global crisis in economy affects all aspects of life.

### **Problem Statement**

Media in Nigeria struggle very hard to survive during economic recession with insufficient fund to safeguard their operation. For most of them to restructure, they have to take additional bank loans, but all the terms of obtaining bank loans have worsened due to the effect of global economic crisis. Economic recession affected the industry globally which also manifested in Nigeria and had massively affected the viability of Kano State radio, the station rather than making profit is now operating at a loss, the subvention the station received from the State government is no longer enough to sustain the station in the area of programmes, payment of casual staff and the general maintenance of the station. The establishment of many private stations in the state also contributed immensely to the current predicament of the station. The station during economic recession was no longer considered the right channel for information dissemination. Corporate and individual bodies' preferred to patronize many of the private stations for their advert placement rather than approaching Kano State Radio. Base on the above, the study aims at finding out how economic recession affects Kano State radio, how do they struggle to survive during recession and to find out the possible measures taking for the station against their smooth operation

The research has the following research questions: To what extent does economic recession affect Kano State radio? To what extend do they struggle to survive during recession? And what are the possible measures taking for the station against their smooth operation?

### **Conceptual Review**

Mass media has performed different role in educating, entertaining and informing people. This made the media to be sword arm of democracy, the watchdog that protects public interest against malpractice and also creates public awareness, agenda setter and the fourth estate of the realm. These roles have made the media a very significant vehicle in the dynamics of

nation building and by extension an indispensable tool in every society. Wood (2006, p2) in his attempt to highlight the importance of media put it thus;

Unlike some of the subjects you study communication is relevant to almost aspect of your life. We communicate with ourselves when we worked through ideas, psych ourselves up to mere challenges, release ways to approach someone about a difficult issue and talk ourselves into or out of various causes of action. We communicate with others to build and sustain personal relationship, to perform our jobs and advance our careers and to participate in social and civic activities.

In every facet of life involves communication and by extension communication is life. Udoakha (2012: p8) state thus:

Over the years, there had been popular demands for freedom of the press for some reasons. Such reasons include the belief that the press incorporating all the mass media; would enhance the free flow of information in the society, promote peace, freedom, wealth and through and end conflicts by the advance of reasons, accumulation and dissemination of information and knowledge, this serve as the mission of communication in the society.

Yet inspite of this bold and gigantic posture of the media, a research by many scholars revealed that most of the media across the world have lost 45 up to 60% of their income due to the global economic crisis (Lishan, 2008 and Nelseh, 2012).

Economic recession of the world influenced so many sectors in the economy which led to creation of losses, and unemployment. Though media houses in Nigeria are regulated by specific laws but still their profit continued to decrease during recession. (Shaohua 2009).

### **Effect of recession**

A slowdown in economic activities affects all sectors. Recession has a devastating impact on employment worldwide. Almost 20 million jobs were lost by the end of 2009 due to the impact of the GFC mostly in construction, real estate, financial services and the auto sector bringing the world unemployment above 200 million for the first time (Central Bank of Nigeria 2012:14).

In US, the rate of unemployment was 5.0 per cent – 10 per cent from December 2007 to October 2009. Recession also affects social life from tourism to certain consumption of household.

According to Zagat's (2009) US hotels, resorts and business travel has decreased in the past years as a result of the recession, even hotels in some countries affected by recessions were responding to the downturn by dropping rates. According to the United Nations World

Tourism Organization (2008) international travel suffered a strong slowdown during recession.

There were several civil unrests in Greece as a result of some conditions set by the trio of the International Monetary Fund (IMF), The European Commission (EC) and The European Central Bank (ECB) to bailout the country from sovereign default. Greece found itself in the condition as a result of debt overhang that resulted in its sovereign default in 2012. The GFC and recession worsen the debt crisis of Greece resulting in many failed election (Central Bank of Nigeria, 2012: 16). Economic crisis also affected the media houses which lead to a massive unemployment, the staff were demoralized with the situation as no functional equipment were available during the recession

### **Types of recession**

According to Tule et al (2012) recession is business cycle contraction where there is decline in certain macroeconomic indicators such as the GDP. As put by Leamer (2009) GDP is the market value recognized final goods and services produced in the country in a given period of time. From the stand point of Mazurek and Metcover (2013) recessions are often described by adjectives such as strong big or severe and they identify four classes of recessions, namely minor, major, severe recession and ultra-recession. According to them minor recession refers to the mildest recession with smaller magnitude. This typically last for only two or three consecutive years, and it means quarterly GDP decline is up to about 1.5%.

The recessions in USA between 1969 and 1970, and the one occurred in Japan during the year 2001 and another one in Sweden 2008 are clear example of quarterly GDP decline. But major recessions are economic events often on the global scale. They lasted from 2 to 4 quarters with mean quarterly GDP growth rate decline between 1 and 3%, while severe recession is a large scale economic downturn and typically lasted for 1 to 2 years with mean quarterly GDP growth rates decline from 3 to 5%. And the extreme recession category is ultra-recession in which GDP falls by 30% or even more and last for several years (Monday & Gerald: 2017:195).

### **Empirical Review**

Several studies were conducted on media and economic recession. In their study, Oyokunyi; Ekeanyanwu, and Aniebo (2017) of the Department of Communication Arts, University of Uyo, Uyo Nigeria, study on economic of decline and survival strategies of Nigerian print media industry study of the Guardian, the Sun and Leadership Newspaper. Their study explores the impact of the global economic recession on three national newspapers based in Lagos, the hub of the newspaper industry and they employed in-depth interview with senior editors of the newspapers to explain the economics of decline as well as investigate the survival strategic adopted by them. Their findings revealed that these newspapers are truly facing a bigger threat of extinction and that the survival strategies adopted by them to stay

afloat are inadequate. The study recommended that an economic template that may involve mergers and acquisitions, shift in traditional news gathering methods, exploring local language publications among others should be embraced by the industry in order to survive beyond 2030.

Another study was employed by Lishan (2008) on media coverage of the economy during normal times and recessions on the index of consumer confidence using time series analysis and Granger Causal analysis. The study explores the causal relationship among economic reporting by media consumer sentiment and the real state of the economy reporting by media. The result indicated that interpretation by media have only limited effects on the level of consumer sentiment in general and the real state of the economy plays a more important role in shaping consumer sentiment. However, during recessions and times of economic slowdown, media have a more powerful effect on consumer sentiment though its impact is still smaller than the real state of the economy.

Another study on the impact of global economic crisis on media restructuring by Ercan (2012), in the Department of Economic, Economics and administrative sciences, Faculty Kyrgyz Turkish Manas University. His findings revealed that the economic recession of the world have influenced so many sectors in the economy. This later led to creation of losses, bankruptcies and unemployment. Though media is regulated by specified law due to its critical public roles their profit continued to decrease. This forced the media to change from grace to grass, while concentrating on personality centered and scandal oriented reporting. This therefore has been able to put pressures on the actual independence of the editorial policies and the honest of journalists and therefore prevents the public from participation. Their conclusion shows that there are more negatives that come with the global economic crisis to the media than there are positives, and therefore it is critical to note that restructuring under the current economic crisis can only take place on a small margin if not any.

### **Theoretical framework**

To explore the relationship between Kano State radio, the government and the clients, the system theory was adopted to underpin this study and serve as theoretical framework for the study.

System theory is general theory that began in the social and physical sciences in the 19<sup>th</sup> Century with George Hegel and was fully developed by biologist Lud Wing von Bertalanffy in the 20<sup>th</sup> Century. According to Bertalanffy cited in Christian, Jacqueline and Francesco (2010) "everything is interconnected and therefore we should study interconnectedness as a means of understanding the world." Systems theory is easily summed up with simple definition, "the whole is greater than the sum of its parts," the most important core tenet of



system theory is the notion of interdependence between sub-systems (Christian, Jacqueline, Francesco, 2010).

Systems theory represent the organization as a complex set of interacting interdependent components all components are dependent on another and any change in one affect the other. The government, Kano radio and the clients are all interdependence hence the theory can apply to this paper because system theory focuses on the relationship between subsystems in organizations. Kano radio is government owned radio station and is linked with government, 75% of its salary comes from government. It also linked with listeners and customers in terms of revenue generation and they interact with each other to achieve organizational goal.

### **Methodology**

The study adopted qualitative research methodology, which according to Mason (2002) is an approach that focuses on exploring and understanding the meaning of individual or groups ascribe to a social or human problem.

Mason (2002) put that qualitative research is most commonly associated with some schools of thought which fall broadly within what is known as the interpretive sociological tradition, particularly phenomenology. He further argued that qualitative research whatever it might be, certainly is not a unified set of techniques or philosophies and indeed has grown out of a wide range of intellectual and disciplinary traditions. In arguing about the methodological advantages of qualitative approach, (Mason, 2002, p 1) put it thus:

Through qualitative research we can explore a wide array of dimensions of social world, including the texture and weave of everyday life, the understandings, experiences and imaginings of our research participants, the ways that social processes, institutions, discourses or relationship work, and the significance of the meanings that they generate. We can do all of this qualitatively by using methodologies that celebrate richness, depth, nuance, context, multidimensionality and complexity.

This clearly implies that qualitative approach is appropriate in conducting a research which aims at understanding emerging social phenomenon, so as to explore deeper range of views and experiences from the people who directly relate or engage with such phenomenon. To ensure the quality of findings Focus Group Discussion (FGD) and in-depth interview were used to generate the primary data from the two sets of respondents.

(Kitzinger, 1995), argues that interaction is the crucial feature of focus groups, because the interaction between participants highlights their views of the world, the language they use about an issue and their values and belief about a situation. Interaction also enables

participants to ask questions of each other, as well as to re-evaluate and reconsider their own understandings of their specific experiences.

Based on the above background, focus group discussion was adopted to generate data from junior workers of the station. While in depth interview was conducted with the top management staff of the station. Four different sessions of FGD were conducted. And followed the five steps of conducting high quality focus group

1. Defining a focus group
2. Designing focus group questions
3. Recruiting and preparing for participants
4. Conducting the focus group, and
5. Analyzing the data

In depth interviewing is a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program, or situation (Boyce, 2006&Osuala, 2005).

Boyce (2006), argued that, the most important advantage of in-depth interview is the wealth of detail that it provides, and that when compared to more traditional survey methods, it provides more accurate responses on sensitive issues under investigations (Boyce, 2006).

The study also used secondary sources particularly records from government agencies, documentary evidence interviews, reports books, journals articles conference papers and other relevant materials derived from internet. The data were analyzed qualitatively using the narrative analysis techniques. The population of the study comprised the entire staff of Kano State Radio Corporation.

Wimmer & Dominick (2003) describe populations as the entire group of all persons who fit into a group by some pre-set criterion. This means that population may, among other things refer to a number of people living in a place, country and by extension, the universe. Wimmer and Dominic (2003, p.84) see population as a group of class of subjects, variables, concepts or phenomena.

### **Sample and sampling technique**

Being a qualitative design, the study adopted non probability sampling. It is argued that, non-probability sampling represents theoretically, a valuable group of sampling techniques that can be used in research that follows qualitative, mixed methods, and even qualitative research design. There are several sampling techniques under non probability including convenience sampling, consecutive sampling, quota sampling, judgmental sampling, snowball sampling, purposive sampling etc. For the purpose of this research, purposive sampling was adopted

for both the top management staffs, the junior staff, and the technical workers of Kano State Radio.

Purposive sampling is a type of non-probability sampling that is most effective to studying a certain cultural domain with knowledgeable experts (Osuala, 2005).

This means that selection of respondents using purposive sampling technique involves their identification as having both the ability and the desire to provide the information capable of achieving the aim and objectives of the study

### **Sample size**

At the level of top management staff of Kano State Radio Six executive management staff were purposively sampled for the in depth interview. They are: The Managing Director; The Admin Manager; Director Commercial; Director Maintenance; Director News & Current Affairs

On the other side, twenty-two junior staffswere sampled from different department; these form the group for focus group discussion. All the sessions were conducted at Kano State Radio Corporation, Gidan Bello Dandago.

### **Discussion of findings**

Findings for both the focus group discussion and in depth interview revealed that majority of the respondents know and do have knowledge of what economic recession is all about. It is obvious that majority of respondents attested that Kano Radio have lost 40 to 70% of their revenue due to the global economic crisis.

Some respondents during the interview disclosed that Kano radio as an organization and communication medium has started operation since 1978, but witnessed a very challenging period during the economic recession which started since 2010. The Managing Director of the station opine that the station was unable to cover its normal broadcast area which comprised the entire state as well as its neighbors' such as Bauchi, Yobe, Borno, Plateau and Sokoto. In addition to the neighboring Countries such as: Republic of Niger, Cameroun and Chad, the Director News opines that the transmitters 2x25kw at Jogana and 2x50kw at Tukuntawa and the outside broadcast Van 153Mhz could not go beyond Kano state.

While Director of Admin and General Services in an attempt to answer the research question on how economic recession affects the viability of the station, opine that during the recession period, the staff of the station were demoralized with the situation as no functional equipment were available. He further opines that the station even went off air for several minutes. The management could not even meet its obligations as several workers and artistes spent months without payment.

The Director Engineering add that the situation further worsen as transmission cannot take for several times due to obsolete and dilapidated equipment's.

Some respondents from the focus group discussion opine that: a respite comes its way after the recession and the change of leadership in the station: according to them new equipment were procured, modern studios were constructed with latest broadcast equipment installed. Some respondents during focus group discussion attested that their station often went off air at varying degrees due to the problems with their equipment's. Some respondents put the problem in technical hitched while others put the blame on lack of government funding; some of the respondents in the same vein attributed the problem to aged equipment's.

Now for a station to have break in transmission is an indication that something is wrong with the way it is being managed. The finding is in line with the system theory adopted, because according to Von Bertanffy cited in Christian Jacqueline and Francesco (2010) everything is interconnected and therefore we should study interconnectedness as a means of understanding the world. Systems theory represents the organization as a complex set of interacting interdependent components. The government, the Kano Radio and the clients are all interdependence on one another.

### **Conclusion**

Conclusively, the economic recession had massively affected the viability of Kano State radio, because the station rather than making profit is now operating at a loss. The subvention the station received from the State government is no longer enough to sustain the station in the area of programmes and payment of casual staff and the general maintenance of the station. The establishment of many private stations in the state also contributed immensely to the current predicament of the station.

The station during economic recession no longer considered the right channel for information dissemination. Corporate and individual bodies 'preferred to patronize many of the private stations for their advert placement rather than approaching Kano Radio. At that moment, the over ten private stations in Kano State are making huge profits while Kano State radio was seriously feeling the negative impacts of economic recession/slowdown.

### **Recommendation**

The paper examines the effect of economic recession on Kano State Radio. In the course of the research, many problems have been identified and it is hope that the recommendations suggested below will go a very long way in providing a lasting solution to the identified problems.

1. Government should as a matter of urgency increase the amount of funds given to the Kano State Radio for the day to day running of the station.

2. New equipment's should be procured for the station so that high productivity could be achieved.
3. Effective mechanisms of monitoring should be put in place by the government so as to ensure prudent and accountable management in the station.
4. The staff of the station should be adequately motivated so that optimum result will be achieved.

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## IFRS ADOPTION AND FINANCIAL REPORTING QUALITY: EVIDENCE FROM THE LISTED INDUSTRIAL GOODS FIRMS IN NIGERIA

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### **Abstract**

*The study examines the Impact of International Financial Reporting Standard (IFRS) adoption on the value relevance of accounting information (quality of financial reporting) of the listed industrial goods firms in Nigeria. The sample comprises nine firms listed on the Nigerian stock exchange. Financial statement figures of 2006 to 2011 (pre-IFRS adoption period) and 2013 to 2018 (post-IFRS adoption period) were used. Descriptive statistics, correlation matrix and Ordinary Least Square (OLS) regression was used to analyze the effect of IFRS adoption on the quality of accounting information and Ohlson Model was used to test the value relevance of accounting information. The results indicate that the earnings per share and book value per share of the Nigerian industrial goods firms have not improved following the IFRS adoption. Therefore, the study concludes that IFRS adoption does not improve the quality of financial reporting to equity investors of the Nigerian industrial goods firms. Hence, earnings reported under the Nigerian Statement of Accounting Standard (SAS) are more informative to equity investors in determining the market value of their investment. The fore, this study recommends that the policy makers should extensively and widely appraise imported policies/standards before thinking of replacing the local once to avoid adopting standards that would not add more value to the economic development but rather destroy it which would in turn affect the local investments and the investors adversely and consequently make the economic development unsustainable. In addition, while appraising imported standards, the policy makers should focus on the peculiarities and the nature of operation of the local firms and the economy to avoid unnecessary adopting standards that will end up serving the interest of foreign multinational firms at the detriment of the local firms.*

**Keywords:** *IFRS adoption, Value relevance, Accounting information, Financial Reporting Quality, Nigeria.*



## **Introduction**

In the rise against the financial crises in late 1990s, the international community emphasized the observance of international standards and codes of best practices in order to strengthen global financial systems. The international community called for the preparation of Reports on the Observance of Standards and Codes (ROSC), an assessment of the degree to which an economy observes internationally recognized standards and codes. It was observed by the World Bank about Nigeria, that the Nigerian Accounting Standard Board (NASB) lacks the financial and human resources as well as the infrastructure for monitoring and enforcing compliance with its standards. The ROSC team observed from a review of published financial statements that there are compliance gaps between the (Statement of Accounting Standard) SAS and actual practice. The ROSC team recommends the creation of a new independent oversight body called the Financial Reporting Council which would monitor and enforce accounting and auditing requirements with respect to accounting standards that are consistent with international practices, inaugurated a Stakeholders' Committee on the Roadmap to the Adoption of IFRS in Nigeria on October 22, 2009.

In July 2010, the Nigerian Federal Executive Council approved the Roadmap to the Adoption of IFRS in Nigeria, it was iterated in the report that, that it will be in the interest of the Nigerian economy for reporting entities in Nigeria to adopt globally accepted, high-quality accounting standards by fully converging Nigerian accounting standards with International Financial Reporting Standards (IFRS) by following a Phased Transition effective January 1, 2012. The transition was made in three phases, Phase 1 relates to the publicly listed entities and significant public interest entities. They are to prepare their financial statements using applicable IFRS by January 1, 2012. Phase 2 relates to other public interest entities, which are expected to mandatorily adopt IFRS, for statutory purposes, by January 1, 2013. Phase 3 relates to Small and Medium-Sized Entities (SMEs) which are expected to mandatorily adopt IFRS for SMEs by January 1, 2014. Eventually, the IFRS adoption is expected to provide equity investors, with more relevant and useful information on the reported accounting data which is said to be related to the market value of their investment.

Value relevance of accounting data is defined as the ability of financial statements information to capture and summarize firm's value (Suadiye, 2012). Barth defines value relevance as the extent to which the accounting amount is associated with some measure of value e.g. share prices. It is thus, an evaluation of the relationship between accounting information and capital market values.

The adoption of IFRS by developing economies like Nigeria was controversial because on one hand, IFRS are considered as developed standards, which require a high level of economic development in order to be implemented successfully. On the other hand, developing countries are characterized by low human development indices, the predominance of the

public sector and a relatively underdeveloped accounting profession. Some scholars believe in the effectiveness of IFRS adoption by developing countries for instance Wallace (1990), Larson (1993), Joshi and Ramadhan (2002). Another group of researchers and international organizations consider that IFRS are flexible enough to respond to the needs of developing countries (Carmona and Trombetta, 2008). While, some other scholars opined that IFRS are not suitable to developing countries because these standards are very complicated, highly developed and influenced by the Anglo-American culture (Hove, 1986 and Perera, 1989). Hence, IFRS are supposed to provide equity investors, with more useful information on the true financial position of companies, which in turn should lead to higher coherence between reported accounting data and market value of listed companies (Escaffre & Sefsaf, 2011). Hence, the following questionnaire: Does the IFRS adoption improve the Value relevance of accounting information.

Studies conducted to investigate the Value relevance of IFRS Adoption are common in Europe having developed capital market with growing interest in developing countries (Devalle, Onali and Riccardo, 2010; Clarkson, Hanna, Richardson, and Thompson, 2011), Daneail, (2015) and Nijam and Jahfer (2018). Attempts to explore the impact of IFRS adoption on the value of accounting information in Nigeria focused on a specific economic sector or industry (e.g Akpaka (2011), Enang (2015). Obeiche and Anene (2017) and Ilu and Bahamman (2018) due to the fact that the structure and accounting practices of firms in different economic sectors may significantly differ (e.g financial service firms and manufacturing firms) and none of the previous studies to the best of researchers' knowledge covers the industrial goods sector. Hence, this suggests the need for investigating the value relevance of accounting data in the Nigerian industrial goods sector.

The aim of this study is to evaluate the Impact of IFRS adoption on the Value relevance of accounting information (quality of financial reporting) in the listed industrial goods firms in Nigeria. To achieve this, the paper adopts the perspective of stock market investors and focuses on value-relevance research. The study is expected to add to reviewers of academic research in the area and it would assist accounting standard setters and policymakers like Financial Reporting Council and Security and Exchange Commission (SEC) by providing research evidence that will help in the decision-making process on financial reporting issues.

The paper is structured as follows; section two presents the literature review, section three is the research methodology, section four is data analysis and discussion of findings and finally section five presents the conclusion and recommendations.

### **Literature Review**

The two primary qualitative characteristics of information in financial statements are relevance and faithful representation. Information in financial statements is relevant when it

is capable of making a difference to a financial statement user's decisions. Relevant information has confirmatory qualitative characteristics distinguish more useful information from less useful information. They enhance the decision-usefulness of financial reporting information that is relevant and faithfully represented. Faithful representation means that the information reflects the real-world economic phenomena that it purports to represent. Relevance and faithful representation make financial statements useful to the users (Palea, 2013). There are also some enhancing qualitative characteristics, which are complementary to the fundamental characteristics: comparability, verifiability, timeliness, and understandability. Enhancing qualitative characteristics distinguish more useful information from less useful information.

According to Barth, Beaver and Landsman (2001) in accounting literature, an accounting number is defined as value-relevant if it has a predicted association with share prices. This, in turn, happens only if the amount reflects information relevant to investors in valuing a firm and is measured reliably enough to be reflected in share prices. Equity values therefore reflect an accounting amount only if the two are correlated. Moreover, value-relevance research interprets accounting amounts or information that are more value-relevant as being of higher quality (Barth, Landsman, and Lang, 2008). Therefore, in this study value relevance of accounting information is referred to as the quality of financial reporting.

### **Empirical studies on IFRS adoption and value relevance of Accounting Information**

Prior empirical studies on IFRS adoption and Value relevance reported inconsistent findings. Some studies reported that IFRS adoption has significantly improved the quality of accounting data while other studies reported otherwise. On one hand, for instance, Karğın (2013) study explores the value relevance of accounting information in pre- and post-financial periods of IFRS application for Turkish listed firms from 1998 to 2011. The results show that market value is related to book value and earnings per share by using the Ohlson model (1995). Overall book value is value relevant in determining market value and stock prices. This indicates that value relevance of accounting information has improved in the post-IFRS period (2005-2011) considering the book values while improvements have not been observed in value relevance of earnings.

Similarly, Muller (2014) investigates the impact of the mandatory adoption of IFRS starting with 2005 on the absolute and relative quality (measured through value relevance) of financial information supplied by the consolidated accounts for companies listed on the largest European stock markets (London, Paris, and Frankfurt stock exchanges). The results shows an increase of consolidated statements quality (value relevance) once IFRS were adopted, thus suggesting also that the IFRS adoption in Europe led to better complying with the OECD Corporate Governance Principle of high quality disclosure and transparency. Moreover, the study reports an increase in the quality surplus supplied by group accounts compared to

parent company individual accounts once the IFRS adoption became mandatory for preparing consolidated financial statements.

Bolibok (2014) investigated the impact of IFRS adoption on the value relevance of fundamental accounting data announced by banks listed on the Warsaw (Poland) Stock Exchange over the period 1998–2012, the analyses were based on the Ohlson residual income valuation model. The empirical evidence shows an increase in the value of both book values of equity and residual incomes of banks after introduction of IFRS but is statistically insignificant. In the same vein, Chebaane and Othman (2014) examined the effect of mandatory adoption of International Financial Reporting Standards on the value relevance of earnings and the book value of equity in emerging economies of African and Asian regions. They focus on value relevance considered as a market based measure of earnings quality. The result reveals that EPS improved over the post IFRS adoption period.

More so, Umoren and Ekwere (2015) empirically examines whether the mandatory adoption of IFRS has improved the value relevance of financial information in the financial statements of commercial banks in Nigeria. The sample comprises of twelve listed banks in Nigeria. Specifically, financial statement figures of 2010 and 2011 (pre-adoption period) and 2012 and 2013 (post-adoption) were utilized. Descriptive statistics and least square regression were conducted to analyse the effect of IFRS adoption on the accounting quality. The result indicates that the equity value and earnings of banks are relatively value relevant to share prices under IFRS than under the previous Nigerian SAS. Results also indicate that earnings per share is incrementally value relevant during post-IFRS period while book value of equity per share is incrementally less value relevant during the post-IFRS period.

Okafor, Ogbuehi, and Anene (2017) analyzed the effect of IFRS adoption on value relevance of book value, earnings per share, and cash flow from operations in Nigerian consumer goods firms. A sample size of 12 firms were selected on the basis of availability of data and a period of eight years (2008-2015) was covered by study. Multiple regression analysis was used in analyzing the data. The findings revealed that IFRS adoption has an incremental effect on the value relevance of book value, earnings per share, and cash flow from operations, with earnings per share showing the highest increment

Lastly, Nijam and Jahfer (2018) investigated the impact of IFRS adoption on value relevance of accounting information in Sri Lanka by comparing value relevance of accounting information in pre- and post-IFRS adoption periods. The study explains market value per share (MVPS) using earning per share (EPS) and book value of equity per share (BVEPS). The pre-IFRS period is covers 2010 to 2011, and the post-IFRS period covers 2012 to 2014. The sample comprises 188 firms and 935 firm-year observations which nearly constitute to all firms listed in Colombo Stock Exchange except those not having at least two annual reports

before and after the year 2012 and those having extreme and incomplete data. The study reports that both BVEPS and EPS significantly and positively explain MVPS during the periods followed by IFRS adoption although EPS was not a significant predictor of MVPS prior to IFRS adoption.

On the other hand, studies like Aubert and Grudnitsk (2011) investigates a Mandatory IFRS adoption across 15 European Countries 2004–2005 using Earnings per share as accounting Measure and Incremental association test Return regression with a dummy variable for accounting standards. The result shows that IFRS adoption is not value relevant. Likewise, Clarkson, Hanna, Richardson, and Thompson (2011) investigates the value relevance of the European and Australian firms from 15 countries post IFRS implementation. They conclude that IFRS adoption don't enhance quality of financial reporting. As such, they found no value relevance of book value of equity and earnings difference between Local standards (GAAPs) and IFRSs. They associate the result with capital market orientation of countries involved and that most local standards were presumably close to IFRSs.

Similarly, Akpaka (2015) investigates the impact of IFRS adoption on value relevance of financial information of listed Deposit Money Banks (DMBs) in Nigeria. The study used data on Earnings per Share (EPS), Change in Earnings per Share (CEPS), Book Value per Share (BVPS) share price (SP). Moreover, Edwards Bells and Olhson (1995) model was adopted to conduct a pre (2006-2009) and post (2010-2013) IFRS analyses on seven (7) listed banks. Using the Generalized Least Square (GLS) the study documented that: Pre- IFRS financial information is value relevant; post IFRS financial information has very weak value relevance and post IFRS financial information has no relative value relevance over pre- IFRS financial information.

In addition, Chado (2017) examines the impact of IFRS adoption on the value relevance of accounting information. The study used price regression model based on a re-modified Ohlson's (1998) model Market share price (MSP); the dependent variable with accounting information was proxy by Book value per share (BVS), Earnings per share (EPS), Dividend per share (DPS), Cash flow from operations (CFO), IFRS served as independent variables in both pre and post IFRS adoption eras. Data was collected from a sample of 20 listed insurance firms for the period 2009–2014. Ordinary least square regression model was used in estimating the weight of the coefficient of models of the study. The overall result shows that the adoption of IFRS has decreased the value relevance of accounting information in the listed insurance firms, however, the individual independent variables EPS, DPS & BVS showed an increase after the adoption of IFRS and positive relationship with market per share. The study recommends that investors should rely more on DPS as a measure of accounting information as it has the greatest contributory value than other variables used in the study. In line with this, Akpan and Ekeria (2018) investigated the value relevance of accounting information

(book value and earnings) on the market price of shares before and after the adoption of the International Financial Reporting Standards (IFRS) in the Nigerian Banking sector. Using a sample of 10 quoted Nigerian Banks for 10 years (2007 – 2016) and the ordinary least square (OLS) regression as well as correlation matrix for data analysis, the result shows an insignificant relationship between book value per share (BVS) and market price per share (MPS) as well as insignificant relationship between earnings per share (EPS) and market price per share (MPS) before and after the IFRS adoption respectively. A comparison of the results for the periods before and after adoption, indicates that the book value per share and earnings per share of banks are not more sensitive to share prices under IFRS than under the previous Nigerian SAS.

However, some studies had attributed the change in the value relevance of accounting information to other factors than IFRS adoption. These include Alnodel (2018) who investigated whether the adoption of IFRS increases the value relevance of accounting information for insurance firms listed in the Saudi stock market. The study employs the Ohlson model (1995) and the Easton-Harris valuation model (1991) in order to examine the association among stock market value and book value and earnings per share. The data was collected for 21 insurance companies listed in the Saudi stock market during the period 2007–2014, which covered pre and post-IFRS periods. The results reveal that the book value of equity becomes less value relevant whereas earnings are more value relevant. Further analysis suggests that the increase in the value relevance of accounting information is positively influenced by companies' attributes, especially profitability and size rather than IFRS adoption. In addition, Kwon (2018) investigated the value relevance change before and after the mandatory adoption of IFRS in the listed Korean financial markets. The study tests the value relevance change by dividing sample data into the periods before (2008–2010) and after (2011–2013) IFRS adoption. The study also categorizes sample data into several subgroups by firm size (large versus small and medium). The empirical results suggest that the value relevance of book value, accounting earnings, operating income, cash flows, and operating cash flows significantly changed before and after IFRS adoption. This result suggests the possibility of a new debate regarding the primary value relevant factor before and after IFRS adoption among the companies listed on the Korea Stock Exchange.

From the foregoing, it could be observed that studies in this area has been of different nature and approach, some studies are multinational, some are country specific while others are carried out in a specific economic sector of a country. Though, studies in this area are mainly in the developed economies but a growing interest in developing countries has been noticed. A number of studies compare the value relevance of IFRS, US-GAAP and local GAAP (SAS in the case of Nigeria) in other countries and used the Ohlson model. It has been noticed that the studies are either on relative value relevance or incremental value relevance. However, the review shows that the results from existing empirical studies reports mixed and

incoherent evidence on the impact of IFRS on value relevance of IFRS adoption, therefore, the need for more studies in the area.

## **Data and Methodology**

### **Population, Sample Selection and Source of Data**

For the purpose of this research 12 firms categorized as industrial goods in the Nigerian Stock Exchange (NSE) are the population of the study. For sample selection and for the purpose of computing the average equity price, only companies with December as financial year end are considered in this study. Moreover, only firms with the available financial statement are also considered. After considering this filter, the remaining firms are 9 which form the sample size.

### **Methods of Data Analysis**

The methods of data analysis deals with the various statistical analysis involved in the description of the collected data and consequently, making decisions and possible inferences about the phenomena represented by the data. In this study, the descriptive statistical methods employed include numerical techniques such as the minimum, maximum, mean and standard deviation. For the estimation of the models, the method of data analysis employed in this study is the OLS regressions on pooled data. The choice of regression is due to the fact that the study is interested in cause and effect relationship and since secondary data is available, regression is better for the analysis (Gujarati, 2007).

### **Variables Measurement and Model Specification**

To find the value relevance of accounting information, our data covers the period from 2006 to 2018. The period is divided as pre-IFRS Adoption 2006-2011 and post-IFRS Adoption 2012-2018 periods to observe improvements or otherwise on the value relevance of accounting information. Market Value per Share (MVPS) or stock prices, Book Value per Share (BVPS), and Earnings per Share (EPS) data was collected from Nigerian Stock Exchange (NSE), Capital Asset database and Cash Craft database.

The Ohlson, Model 1995 which consists of two major indicators from financial reports (balancesheet and income statement), is used to test the value relevance of financial reporting in many studies is modified in order to capture effect of IFRS Adoption as stated by Ohlson (1995). Therefore, the choice of this model in testing the value relevance is influenced by previous studies e.g. Muller (2014), Bolibok (2014), Umoren and Enang (2015). Ohlson model (1995) is adopted to explore relations between equity market value with two main financial reporting variables, namely the equity book value per share (represents balance sheet) and earnings per share (represents income statement). The model is based on Clean Surplus accounting theory. The theory connects the relationship between earnings, book value and share price with any other factor that affects share price. Clean surplus accounting exists when

the change in book value equals earnings minus dividends, where dividends are net of capital contributions (Bryant, 2003)

The paper evaluates the impact of IFRS adoption on the Value relevance of accounting information in the listed industrial goods firms in Nigeria through value-relevance tests using a relative and incremental value relevance research design. To measure the value relevance of book value and earnings using least-square regression the study adopts the adjusted coefficient of determination (adj. R<sup>2</sup>) as the unit of measurement Umoren and Enang (2015).

### **Dependent Variable**

**Share price (SP):** For the purpose of this study, I computed average closing share prices from 31 March to 30 April of each year if the accounting year end is 31 Dec. Otherwise the appropriate date is considered, ensuring that the companies have already published the annual reports for the preceding year. I consider that using average closing prices for a certain period of time (as opposed to using the closing price of a certain day) for example 31 April or 31 December has the advantage of neutralizing possible daily fluctuations of the prices, caused by factors that are not linked to the financial information published in the annual reports. This is in line with Müller (2014).

### **Independent Variables**

**Earnings per share (EPS):** can be calculated by dividing the profit after tax of the period attributable to shareholders by the number of ordinary shares outstanding.

**Book Value of Equity (BVE):** This is computed by dividing the shareholders fund by the number of ordinary shares outstanding for the accounting period.

### **Model specification**

Model (1) is based on the explanatory power from a regression of the share price on the book value of equity and earnings per share while models. Model (2) is designed to evaluate the Incremental value relevance. All the Models are analysed under pre and post IFRS adoption periods.

$$SP_{i,t} = \alpha_0 + \alpha_1 BVE_{i,t} + \alpha_2 EPS_{i,t} + \epsilon_{i,t} \quad (1)$$

$$SP_{i,t} = \alpha_0 + \alpha_1 BVPS_{i,t} + \alpha_2 EPS_{i,t} + \alpha_3 P + \alpha_4 P \times BVE_{i,t} + \alpha_5 P \times EPS_{i,t} + \epsilon_{i,t} \quad (2)$$

Where  $P_{it}$  is the price of common stock of the firm  $i$  three months after fiscal year's end. This means that the selected price of year  $t$  will be the price of March  $t+1$ ,  $EPS_{it}$  is the earnings per share of firm  $i$  during the year  $t$ ,  $BVE_{it}$  is the book value per share of firm  $i$  at the end of year  $t$  and  $\epsilon_{i,t}$  is the error term.



P is a dummy variable set equal to 1 for the post-IFRS period and 0 for the pre-IFRS period.

P × BVPS is the interaction variable between P and BVPS

P × EPS is the interaction variable between P and EPS

For the purpose of this study, I computed average closing share prices for 31 March to 30 April of each year, ensuring that the companies have already published the annual reports for the preceding year. I consider that using average closing prices for a certain period of time (as opposed to using the closing price of a certain day for example 31 April or 31 December has the advantage of neutralizing possible daily fluctuations of the prices, caused by factors that are not linked to the financial information published in the annual reports. This is also in line with the Müller (2014).

## **Results and Discussion**

### **Descriptive Statistics**

The general characteristics of study variables; Earnings per share, book value per share and the stock market price for pre-IFRS and post-IFRS are presented in Table 1 and 2. For pre-IFRS period, the share price varies from ₦1.80 to ₦66.21 with a mean of ₦17.40 and a standard deviation of ₦14.60 which indicates moderate's dispersion of the data. The Earnings per share ranges from ₦0.06 to ₦3.55 with a mean of ₦1.33 and a standard deviation ₦1.07 whereas the book value per share has a minimum of ₦0.69 and a maximum of ₦57.80 with a mean of ₦7.65 and a standard deviation of ₦11.11, meaning that the data clusters around the mean value.

The post IFRS period share price varies from ₦1.40 to ₦76.85 with a mean of ₦18.62 and a standard deviation of ₦19.04. The Earnings per share ranges from ₦-0.09 to ₦4.78 with a mean of ₦1.35 and a standard deviation ₦1.29 whereas the book value per share has a minimum of ₦0.02 and a maximum of ₦25.99 with a mean of ₦7.86 and a standard deviation of ₦7.66.

From the descriptive statistics of the study variables presented in Table 1 and 2 reveals that the data does not follow a normal distribution because of the larger difference between the Minimum and the maximum values for both periods. However, the mean values for share price, Earnings per share and Book Value per share shows a slight increase from pre IFRS to Post IFRS adoption. This may indicate a slow economic growth and capital market between pre-IFRS and Post-IFRS adoption periods.

**Table 1: Descriptive Statistics Pre-IFRS**

Variable	Minimum	Maximum	Mean	Std. Deviation
Share price pre-IFRS	1.80	66.21	17.40	14.60
Earning per share pre-IFRS	0.06	3.55	1.33	1.07
Book value per share pre-IFRS	0.69	57.80	7.65	11.11

Source: Compiled by the Researcher using Stata 13 (2019)

**Table 2: Descriptive Statistics Post-IFRS**

Variable	Minimum	Maximum	Mean	Std. Deviation
Share price post-IFRS	1.40	76.85	18.62	19.04
Earning per share post-IFRS	-0.09	4.78	1.35	1.29
Book value per share post-IFRS	0.02	25.99	7.86	7.66

Source: Compiled by the Researcher using Stata 13 (2019)

### Correlation Matrix

The correlation matrix seeks to establish relationships that exist between variables used in the study. This helps to understand the relationship that exists among variables especially the independent variables.

From Table 3, it could be observed that Share price has a positive relationship with the Earnings per share and Book Value of equity in pre-IFRS period then in post-IFRS period. This means that earnings attracts higher prices but this is higher in pre-IFRS period the in post-IFRS period.

**Table 3: Pre and Post IFRS Correlation Matrix**

	PRE-IFRS ADOPTION			POST-IFRS ADOPTION		
	SP	EPS	BV.E	SP	EPS	BV.E
SP	1.00			1.00		
EPS	0.56	1.00		0.12	1.00	
BV.E	0.58	0.47	1.00	0.16	0.33	1.00

Source: Compiled by the Researcher using Stata 13 (2019)

### Diagnostic Tests

In this section, regression diagnostic tests are conducted on the model to ensure that it satisfies certain assumptions that could at least guarantee the presence of unbiased estimates in the model. The test includes the normality test for the residuals, multicollinearity, the heteroskedasticity test and the Ramsey reset test.

**Table 4:** Post Estimation Tests

	VIF	Breusch-PaganGodfrey test for heteroskedasticity	Ramsey Reset
EPS	1.18	0.727	0.8112
BE	1.18		

**Source:** Compiled by the Researcher from Stata 13 (2019)

The test of residuals was conducted to assess the normality of the model residuals, when residuals are not normally distributed it indicates the presence of significant outliers in the data which affects the standard errors and then the significance levels of the coefficients. The variance inflation factor (VIF) explains how much of the variance of a coefficient estimate of a regressor has been inflated, as a result of collinearity with the other regressors. Ideally, VIFs above 10 shows a serious collinearity problem. As observed in table 4, the VIF's values are less than 2 hence none of the variables has indication of multicollinearity. The test for heteroskedasticity was carried out on the residuals. The results showed probabilities above 0.05 which inform us to reject the presence of heteroskedasticity in the residuals. The performance of the Ramsey RESET test showed high probability values that were greater than 0.05, indicating that there was no significant evidence of miss-specification.

### Regression Models

#### Relative Value Relevance

Table 5 Present result of the regression for pre and post IFRS adoption, the results shows a sharp decrease of  $R^2$  between pre IFRS and Post IFRS periods from 65% to 3%. This Indicates that the earnings per share and book value of equity reported under Local SAS explains more about share prices as compared to the IFRS. The coefficients of EPS and BV.E also decreases from 3.43 to 1.18 for EPS and from 0.86 to 0.32 for BV.E. This shows deterioration in the post IFRS period. The explanatory power of Earnings per share and Book value per share is very low for post IFRS period.

**Table 5:** Value relevance for Earnings per share and Book value of equity for pre and post IFRS adoption periods

Models	Regression Coefficients		R <sup>2</sup>	F Value
	EPS	BV.E		
(1) Pre-IFRS adoption	3.43*	0.86	0.65	79.08*
	(1.84)	(10.33)		
(1) Post-IFRS adoption	1.18*	0.32	0.03	0.78***
	(0.62)	(0.75)		

\*\*\*, \* denotes significance at 0.1, 0.05 and 0.01 levels respectively. The two tailed test statistics is shown in parenthesis

**Source:** Compiled by the Researcher using Stata 13 (2019)

### Incremental Value Relevance

To assess whether the book value per share and earnings per share are incrementally value relevant in the post IFRS period, coefficients  $\alpha_4$  and  $\alpha_5$  in Model 2 has to be positive and significantly different from zero as determined by two tailed test. From Table 5 we can see that the R<sup>2</sup> is 26%. The coefficients of EPS and BV.E are 3.39 and 0.87 respectively. The coefficient of the interactive variables PXEPS and PXBV.E are -2.20 and -0.54. The coefficient of EPS and BV.E are significant at 5% and 1% respectively while the coefficient of interactive variables are significant at 10% and 5% respectively. The coefficients of EPS and BV.E are positive whereas the coefficient of PXEPS and PXBV.E are negative. This result indicates that EPS and BV.E were relevant in pre-IFRS and irrelevant in the post-IFRS period. This result is consistent with that of Table 4. This is in-line with the result obtained from the studies of Aubert and Grudnitsk (2011), Clarkson et al (2011), Akpa(2015) as well as Muhammad (2017). The result contradicts the findings of Muller (2014), Bolibok (2014) and Umoren and Ekwere (2015), Okafor et al (2017) and Nijam and Jahfer (2018). Thus, the result indicates that the Equity Values and Earnings per share of industrial goods firms are not sensitive to their share prices following the IFRS adoption. This may equally imply that earnings reported by industrial goods firms under the Nigerian SAS are more informative to equity investors in determining the equity market value. Hence, this study finds that IFRS adoption does not improve the quality of financial reporting to equity investors.

This finding could be extensively discussed in-line with the argument by scholars in this area. Some scholars believes in the effectiveness of IFRS adoption by developing countries (Wallace, 1990; Larson, 1993; Joshi & Ramadhan, 2002). Another group of researchers and international organizations consider that IFRS are flexible enough to respond to the needs of developing countries (Carmona & Trombetta, 2008). While, some other scholars opined that IFRS are not suitable to developing counties because these standards are very complicated, highly developed standards are influenced by the Anglo-American culture (Hove, 1986 & Perera, 1989). IFRS are supposed to provide equity investors, with more useful information on the

true financial position of companies, which in turn should lead to higher coherence between reported accounting data and market value of listed companies (Escaffre & Sefsaf 2011). Therefore, this study concurs with the opinion of (Hove, 1986 & Perera, 1989) that IFRS are not suitable to developing countries because these standards are very complicated, highly developed standards are influenced by the Anglo-American culture.

However, the following reasons could be proffered for getting a result of this nature. Firstly, the time and the level of preparation by Nigerian firms to meet the challenges of IFRS adoption Secondly, the BV.E shows a general view of a firm's Equity and Net Asset position and IFRS adoption involves valuing assets at a point in time and as such increases the volatility in book values of firms. Secondly, with IFRS adoption the definition of intangible asset changed. The Implication is that items that were usually considered as assets and treated in the balance sheet are now expensed in the income statements.

**Table 5:** Incremental Value relevance of Earnings and book value

per share

Model	Regression coefficient					R <sup>2</sup>	F Value
	EPS	BV.E	P	PXEPS	PXBV.E		
2	3.39**	0.87*	8.13***	-2.20***	-0.54**	0.26	31.89*
	(1.87)	(10.43)	(1.24)	(-0.83)	(-1.21)		

\*\*\*, \*\*, \* denotes significance at 0.1, 0.05 and 0.01 levels respectively. The two tailed test statistics is shown in parenthesis

### Conclusion and Recommendations

This study examines the value relevance of accounting information of the listed manufacturing firms in Nigeria. The findings of this study show that the earnings per share and book value per share of the industrial goods firms in Nigeria have not improved following the IFRS adoption. On the basis of this therefore, the study concludes that IFRS adoption does not improve the quality of financial reporting to equity investors of the Nigerian industrial goods sector. Hence, earnings reported under the local SAS by industrial goods firms are more informative to equity investors in determining the market value of their equity investment.

It is therefore recommended that the policy makers should extensively and widely appraise imported policies/standards before thinking of replacing the local once to avoid adopting standards that would not add more value to the economic development but rather destroy it which would in turn affect the local investments and the investors adversely and consequently make the economic development unsustainable. In addition, the policy makers should focus on the peculiarities and the nature of operation of the local firms and the

economy to avoid unnecessary adopting standards that will end up serving the interest of foreign multinational firms at the detriment of the local firms.

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## ASSESSMENT ON THE PROVISION AND FUNDING OF ELECTRONIC INFORMATION RESOURCES IN STATE UNIVERSITY LIBRARIES, NORTH-WEST ZONE NIGERIA

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### **Abstract**

*The purpose of this paper is to investigate and assess the provision and funding of Electronic Information Resources in state University Libraries in North-West zone of Nigeria. A qualitative research methodology was used and narrative design was adopted for the study and purposive sampling was also used while semi structured interview was used for data Collection from twelve respondents which comprises University Librarians and Heads of ICT Units of 6 State University Libraries in the North-West Zone of Nigeria. The thematic data analysis was used to carry out the analysis of the data collected from the respondents. The findings revealed that a number of Electronic Information Resources are provided ranging from both online and offline databases, e-books, e-journals, CD ROM and other Internet based resources. It was also revealed that State University Libraries sourced their funds for the management of Electronic Information Resources from state governments, Tertiary Education Trust Fund (Tetfund) and Library annual budget. that there is a need for and the provision of more e-resources, and the Libraries should look for more alternative ways in sourcing funds through local and international nongovernmental organisation and philanthropists. There by reducing their total reliance on government and Library annual Budget.*

**Keywords:** *Provision, Funding, Electronic Information Resource, University, Libraries*

### **Introduction**

Libraries have existed for thousands of years and are considered to be places where information resources and services are brought together for the purpose of sharing knowledge and experiences; these roles have been revolutionized by recent development in Information and Communication Technologies (ICT). The current information revolution and increasing impact of ICTs has modernized the process of learning and research in most University Libraries. Dafiagor (2012) observed that “expert systems, wireless network, virtual collections,

interactive web interfaces, virtual reference services and personal web portals have brought changes since the beginning of the new millennium”.

However, there have been clearly significant moves from paper-based information to electronic access to information and knowledge for higher education. Though, the traditional functions and objectives of the Library remains the same, the method of information dissemination and the format are changing. The academic Library environment is in a state of transition in terms of resources and services; many information resources once available in print are now available in CD ROMs, Online and other available Electronic forms.

Financial resource is also fundamental in a Library system. In fact, the degree of financial adequacy determines the effectiveness of the Library. Ndekwu (1991) remarks that it has become a common knowledge that institutions of higher learning in Nigeria are underfunded and thus many services can no longer be adequately provided in such institutions. He argues that even when funds are available they are grossly inadequate because of the soaring prices of electronic and print resources.

### **Statement of Problem**

Electronic resources have become a critical part of the learning environment particularly in the higher education and it brings tremendous benefits to organizations and individuals to perform their work more efficiently Daulat (2014). The benefits of electronic resources also include provision of space economy; ease of access through numerous metadata, search engines, Online Public Access Catalogues (OPAC). In a study conducted by Oldy (2005), on the effect of funding in Nigerian University Libraries, the study found that funding is one of the primary economic elements and it's very important in the provision of Library resources. The study also found that, low level of funding in University Libraries had led to the deterioration in the quality of Library collection. The researcher then recommended that government which is the sole financier of the Libraries should see that it is adequately funded.

Moreover, Libraries around the world are moving at fast rate to provide digital Library in order to meet changing user needs and requirements. The trend in Nigeria is for the Libraries to provide e-resources and services that a user can access anywhere and anytime without necessarily coming to the walls of the Library. Many Libraries particularly state University Libraries in north-west of Nigeria have one form of e-Library or another or not having one. However, little empirical evidences and research studies have been conducted on the types of information resources with regard to their Management. It is against this background this study is designed to examine the Provision and Funding of Electronic Information Resources in state University Libraries in North-West states of Nigeria with a view to finding out the challenges so that laudable solutions for effective management of these Libraries can be perform.

### **Objectives of the Study**

1. To ascertain the types of Electronic Information Resources provided in state University Libraries in North-West Zone of Nigeria.
2. To find out the sources of funding Electronic Information Resources in the Libraries under study.

### **Significance of the Study**

The result of this study will be useful to information professionals in the institutions of higher learning especially the University librarians who are the top level managers that make policies for the improvement and betterment of information services in their Libraries.

### **Scope and Limitation**

The study covered all the State University Libraries in North-west zone of Nigeria with exception of Sokoto State University Library which does not have the ICT Unit and e-resources. The study is also confined to e-resources and how they are funded in state University Libraries in North-West zone of Nigeria. Inability of the researcher to cover both federal and State Universities as such findings of this study will not be generalised to other University Libraries in the zone.

### **Review of Related Literature**

Electronic Information Resources are resources in which the information is stored electronically and are accessed through electronic systems and network. In this context the term primarily denotes "Any electronic product that delivers collection of data be it text, numerical, graphical or time based as a commercially available resources (Bevekeny, Veeran and Salih 2003). Sadeh and Elingsen (2005) also asserted that, Electronic Information Resources are package of e- journals or Databases of abstracts and indexes that include full text of some articles referenced by the indexes. They further stressed that, Electronic Information Resources is the interface through which it is offered, and should be considered because these element are intricately linked, even though they can be licensed separately. Dadzie (2008) was of the opinion that Electronic Information Resources are invaluable research tool that complement print based resources in any traditional Library setting. Similarly, Sabouri (2010) also define Electronic Information Resources are invaluable research tools which complement print resources in traditional Library settings. They provide access to information because that might be restricted to the users because of geographical location or finances.

Smiths (2010) in his article Changes in the Faculty Reading Behaviour stressed that, The impact of electronic journals particularly Library access is integral to research activities where the vast majority of respondents reported that they read at least one article from an electronic

source weekly. Furthermore, Electronic Information Resources are capable of providing services both within and remote to users irrespective of their location through electronic means. Gladney (2010) described a digital Library services as assemblage of digital computing and software needed to produce, emulate and extend the services provided by conventional Libraries based on paper and other materials means of collecting, cataloguing, finding and disseminating information, while the virtual Library on the other hand is said to be the one with a number of different information resources that can be accessed by an end user rather than delivering the end user to a physical set of resources.

Electronic resources are electronic representation of information; these are available in various formats like e-books online journals, e-magazines, e-learning, tutors and online test. Because of the effective presentation with multimedia tools, these e-resources have become the sources of information (Dadzie, 2005). According to Bothman and Holbig, (2010) Electronic Information Resources includes CD Roms, e-journals, and locally loaded databases, websites and abstracting and indexing databases such as Medline. They further stated that electronic resources also include products that aid in resources access for patron such as A-Z list open URL servers federated search engines and resources that provide full text context such as publishers electronic journal content, journal contents platforms such as project muse or Jstor and content aggregators such as Ebschohost, academic search premier and proxy servers or other authentication tools (Bothmann and Holmbig, 2010).

Financial resource is fundamental in a Library System in fact, the degree of financial adequacy determine the effectiveness of the Library. Nwalo (1997) opined that the poor state of funding of academic Library in Nigeria is most likely that the provision of Library resources and services that depend on finance will be adversely affected. It is assumed that it affects the main Libraries in Nigerian Universities and may likely affect the departmental Libraries too. Without an appropriate assessment of performance of departmental Libraries, the effect cannot be manifest.

Okiy (2010) stressed that academic Library is a very important sector of tertiary institution to her, the scenario of inadequate funding in tertiary institution Libraries by both state and federal government leave much to be desired. She further explains that University Libraries funding have continue to dwindle since mid-1980s along with downturn in the economic fortunes of Nigeria, this has resulted in deterioration of the quality of resources, services and technology in the Library. The implication of this that many tertiary institution Libraries have not been able to acquire collection comprehensively enough to meet the need of their users. It could be seen from the literature reviewed that in most cases academic Libraries are underfunded in both Federal and State owned institutions. There are also problems within the institutions in general; that the management of these institutions doesn't consider Libraries as important, as such no priority is given to them.

Okoro (2005) asserted that Libraries are thus starved as of vital funds that should be used in developing their collection. Academic Libraries cannot be affectively developed without enough funds. Inadequate financial support to academic Libraries has much negative impact on resources development for the development of the Libraries. Ifidon (2006) states that as it stands now there is no known financial standard for the Library development. The situation is more precarious in academic Libraries as what is regarded as book budget is a will guess or an approximation of imagination. Edoka (2007) and Ifidon (2009) reported that book aid international and international donor agency has shown great concern over the problem in 2005.

Roseroka (2010) identified budgetary process and academic support as constraint facing University Libraries. She emphasized that research activities of faculty are rooted in the creation of knowledge and research process values. Personal interest informs and advance contribution to knowledge, teaching and course design. Without Library materials to support such influential stakeholders, the credibility of the Library is eroded.

It should be noted that there often, the recipients of fund assistance to Libraries through local or international NGOs and these may have a symbiotic relationship with such organization, particularly with regard to fund raising and income generation. Example of such organizations include Ford Foundation, World Bank, International Monetary Fund (IMF), United Nations Development Project (UNDP), World Health Organization (WHO), United Nations Children's Fund (UNICEF), United Nations Educational and Scientific Cultural Organisation (UNESCO), BRITISH COUNCIL, Book Aid International (Dawakin kudu,2002).

The development of NGOs in Africa is very slow when compared to those in Asia and Latin America. During the colonial era, churches and missionary societies were the principals of health and education services especially in rural areas. Late in the colonial period ethnic welfare groups, women group and poverty alleviation organizations were involved. For instance, non-governmental organization has been aiding the development of knowledge and in particular Libraries.

According to Wise (2000) Nigerian Libraries have benefited from continued education opportunities overseas provided by Carnegie, Ford and other foundations such as British council, UNESCO and other organizations. Instances of such assistance have been documented from foreign organizations such as Carnegie cooperation New York, United Nations Scientific and Cultural Organization (UNESCO), United Nations Children's Fund (UNICEP), Ford Foundation, British Council and so on (Sharples, 1994). These organizations have been providing financial support and training aid to institutions and organization especially in developing countries such contribution contribute toward the development of

education specifically Libraries in collection and services. Ibinoba (1997) further observed that Ford and Rockefeller foundation, Carnegie cooperation, United States Information Services and the British Council and Brother's brother (USA) have over the years made generous donations and aids to Nigerian Academic Libraries.

### **Research Methodology**

This study was designed to examine the provision and funding of Electronic Information Resources in University Libraries of North-West zone of Nigeria. The qualitative research methodology was found to be relevant for the study, because the respondents are not many and are in better position to answer the research questions. Qualitative research involves the collection of limited samples, intensive interviews, close interaction with respondents and careful transcription of verbal and textual data (Berge, 2004).. The narrative based qualitative research design was adopted for this study. Narrative inquiry is the process of gathering information for the purpose of research through storytelling. The researcher then writes and narrates the experience (Trahar 2009). The researcher also used purposive sampling in selecting the participants. Purposive Sampling (Judgement Selective or Subjective Sampling) is a sampling technique in which researcher relies on his judgement when choosing members of the population to participate in the study.

A semi structured interview was used for data collection from the 12 respondents of 6 state University Libraries comprising the University librarians and the ICT heads. The Qualitative Data data analysis (QDA) was used to carry out the analysis of the data collected from the respondents

**Table 2:** List of all State Owned Universities in North-West Zone Nigeria

S/NO	University	Year of Establishment of Institution	UNI. LIBRARIAN	Head of Automation/e-library Unit.
1	Kano University of Science and Technology Wudil, Kano State.	2001	1	1
2	Kaduna State University, Kaduna State.	2004	1	1
3	Umaru Musa Yar'adua University, Katsina.	2006	1	1
4	Sule Lamido University. Kafin Hausa, Jigawa State.	2013	1	1
5	Kebbi State University of Science and Technology, Aliero	2007	1	1
6	Yusuf Maitama Sule University, Kano State	2012	1	1
7	Sokoto State University, Sokoto State.	2012	1	0
	<b>TOTAL</b>		<b>7</b>	<b>6</b>

**Source:** Preliminary Study November, 2018

**Table 2:** List of State Universities with E-resources and ICT Unit in North-West Zone Nigeria

S/NO	University	Year of Establishment of Institution	NO. OF RESPONDENTS		TOTAL
			University Librarian	Head of ICT Unit	
1	Kano University of science and technology wudil.	2001	1	1	2
2	Kaduna State University.	2004	1	1	2
3	Umar Musa Yar'adua University.	2006	1	1	2
4	SuleLamido University. Kafin Hausa.	2013	1	1	2
5	Kebbi State University of science and technology.	2007	1	1	2
6	North-West University Kano.	2012	1	1	2
	<b>TOTAL</b>		<b>6</b>	<b>6</b>	<b>12</b>

**Source:** Preliminary Study November, 2018



### Data Presentation, Analysis and Interpretation of Findings

**Table 3:** Background information of the participants

S/N	University	Year of Establishment	Rank	Qualification	Code
1	Kaduna State University Kaduna	2004	University Librarian.	PhD LIS	P1
			Head of ICT.	MSc.Info. Sci.	P2
2	Kebbi State University of Science and Technology Aliero	2007	University Librarian.	PhD Islm. Stds.	P3
			Head of ICT.	MLIS	P4
3	Yusuf Maitama Sule University Kano	2001	University Librarian.	PhD LIS	P5
			Head of ICT.	BLIS	P6
4	North-West University Kano	2013	University Librarian.	MLIS	P7
			Head of ICT.	BLIS	P8
5	Umar Musa Yar'adua University Katsina	2006	University Librarian.	PhD LIS	P9
			Head of ICT.	BLIS	P10
6	Sule Lamido University Kafin Hausa	2013	University Librarian (Ag).	BLIS	P11
			Head of ICT.	B.Sc Comp. Sci.	P12

Table 3 reveals that out of twelve (12) participants, three (3) had PhD in Library and Information science, one had PhD in Islamic Studies making a total of four (4). Three (3) had Masters in Library and information Science (MLIS), four (4) had Bachelor in Library and Information Science while One (1) with Bachelor of Science Computer Science. However, their rank ranges from University Librarians to ICT sectional Heads. This shows that the participants had adequate qualification in that respect.

The table also shows that the code given to each participant appeared on the table, the date and time within which the researcher conducted the interview was from 22 February to 30<sup>th</sup> March 2018. Moreover, the interview lasted for about forty-five (45) minutes in their respected offices. The table also shows the years in which the Libraries were established.

### Result and Discussion

**Question:** The researcher asked the participants on types of Electronic Information Resources (EIRs) provided in their ICT Unit.

**Response:** there were different types of (EIRs) provided. The participants have identified different (EIRs) provided in the State University Libraries under study.

**P1 & P2:** *The types of (EIRs) we have in this Library Are Databases such as Science Direct, Jstor, Agora, Teal, Hinari, e-brary Bio-one, science direct, scopus, springer, proquest, cobhust etc. Online Reference Resources Such as Ajol, Doaj, Book boom and Institutional Digital Repository. This indicated that the Kaduna State University Library has a large volume of both online and offline databases from the data collected, it also has digital institutional repository unlike other state University Libraries. it was also seen from the data collected that it has the highest number of available e-resources among the state University Libraries in North-West zone of Nigeria*

**P3 & P4:** *Today we are having in stock volumes of Electronic Information Resources which consists of online electronic databases eg Jstor, Agora, Science Direct, Hinari, institutional repository which include manuscript and theses. It was gathered during the interview that Kebbi State University of Science and Technology has some Electronic Information Resources such as online databases as well as e-books, e-theses and other internet web-resources. It also has a fair stock of Electronic Information Resources.*

**P5 & P6:** *The types of (EIRs) we have in this our Library comprises of the e-journals, e-books CDs, databases and web resources ranging from Science direct, Ebscohost, Proquest, European American Journal, Agora, Hinary, Nigerian Vertual Library, Oare and Innearsk. This clearly shows that Kano University Science and Technology has the above mentioned e-resources; both online and offline, e-books, CD ROM and other internet web resources. It also has a fair stock of Electronic Information Resources in their Libraries.*

**P7 & P8:** *The types of Electronic Information Resources we are having today in this Library are e-books, e-journals, CDs, Audio visual information resources (Chamila), online databases such as Springer, Science direct, Jstor, Hinary, Agora and law scope. It clearly shows that CD Roms, e-books, audiovisual information resources online and offline Databases are all available in North-West University Library. It also indicated that it has reasonable Electronic Information Resources in stock.*

**P9 & P10:** *The types of Electronic Information Resources provided in this Library are e-journals and e-books Databases such as Science direct, Elsevier, Ebscohost and Nexis Nexisz. We equally have some open source Softwear such as Bookzizi and BookFi. The researcher gathered that they don't have institutional repository and CDs which are available in some state University Libraries in the region, in terms of similarities, the researcher found out that a reasonable number of both online and offline databases are provided in this Library.*

**P11 and P12:** *The types of electronic information we provide here are Offline databases, E-books CD ROMs and other web resources. It has been noticed that online databases are not provided, the*

institutional repository as well as Library portal is not available in this Library. Offline databases are provided just like the other state Universities Libraries in North-West zone.

**Question:** The researcher asked the participants on sources of funding of electronic information resource as well as Library annual percentage spent on EIRs, and whether the percentage is adequate or not.

*P1p2: We source funds for the procurement of EIRs through Library annual budget from the University management and we also receive TetFund grant. At least 20% is being spent on the procurement of EIRs which is not adequate.*

From the above submission it was indicated that the source of funding Electronic Information Resources are through Library annual budget and Tetfund intervention only. There was no contribution from individuals or organisations and the annual Library budget spent on the Library received from University management stood at 20% which goes to procurement of Electronic Information Resources.

*P3p4: We source fund from the annual Library budget from the University management and Tetfund grant and I cannot ascertain the level of percentage spread on EIRs and the funds are not adequate.*

This indicates that the Libraries source funds through two ways that is TetFund and Library annual budget received by their University management just like other state University Libraries but there is no available data on percentage of Library annual budget spent on procurement of Electronic Information Resources.

*P5p6: We source our fund through Library annual budget received from the University management and tertiary education trust fund (Tetfund) but cannot ascertain the level of percentage spent on EIRs, and the funds are not adequate enough.*

This is however revealed that, they source funds through two ways; that is TetFund and Library annual budget received by their University management just like other state University Libraries. But there is no available data on percentage of Library annual budget spent on procurement of Electronic Information Resources.

*P7p8: We source our funds for procurement of EIRs here through Library annual budget, gift, donations and tertiary education trust fund (Tetfund). At least 60% of the Library annual budget is allocated to procurement of EIRs, and is adequate.*

This indicated that they source funds through three ways that is TetFund and Library annual budget received by their University management and they also received gift and donation

from individuals unlike other state University Libraries while 60% percent of Library annual budget is spent on procurement of Electronic Information Resources.

*P9P10: We mostly source our funds from tertiary education trust fund (TetFund), state government annual (budget) and lastly donations from both local and international organizations as well as philanthropists. The percentage is not available but the funds allocated to the EIRs are fairly adequate.*

This indicated that they source funds through three ways that is TetFund and Library annual budget from their University management received from the state government. They also receive gifts and donations from individuals and organisations unlike other state University Libraries. The respondent also revealed that there is no actual percentage spent on the procurement of Electronic Information Resources just like other state University Libraries in North-West.

*P11p12: We source for the procurement of Electronic Information Resources from the annual Library budget from the University management but the percentage allocated to EIRs is not available.*

The data collected from this respondent shows that they used only percentage of money received for the Library. There is no available data on the percentage of money spent on Electronic Information Resources as revealed by the interviewee.

The result of the interview with regards to types of Electronic Information Resources provided indicated that, different types of Electronic Information Resources are provided ranging from e-books, e-journals, CDs, Databases (online and offline). It was only p11 p12 that has less Electronic Information Resources because it has been established recently. This shows that state University Libraries provide a number of Electronic Information Resources which include science direct, hinary, elseview, ebscohost, springer, e-grannay, teel, agora, dione, jstore, e-book and CD-ROMs services. Evidently, this finding is in line with Boothmand and Holbig 2010 who stressed that EIRs include CD ROMS, E-journals, locally loaded databases, web resources, and indexing and abstracting Databases like medline.

Poor funding as major problem facing the management of EIRs in all the Libraries under study sourced their funds for EIRs through the Tertiary Education Trust Fund (Tetfund) intervention, donations from individuals, state governments and average percentage from the University management.

This finding is in line with that of Bothman and Holmberg (2006) who highlighted some of the challenges associated with provision and management of EIRs as lack of consisting policy, staffing, budgeting and funding, change, communication, internet connectivity and user education.

### **Conclusion and Recommendations**

From the findings, there was clear indication of different types of EIRs provided and maintained in the Libraries under study ranging from e-Databases, online and offline, CD ROM, e-books, e-journals and other Internet web resources. This indicated that effort is being intensified by these Libraries to carry out their function of providing their users with relevant Electronic Information Resources as expected.

However, the findings on source of funding clearly indicated that state University Libraries largely depend on state government funds, Tertiary Education Trust Fund (Tetfund) interventions, some percentage of Library annual budget and donations from individuals. Considering the above findings by the researcher, the following recommendations are hereby made:

Even though reasonable EIRs are provided, there is need for the provision of more EIRs especially in the present digital era in order to cater for the need of Library users. The Libraries should also look forward and find more alternate sources to fund EIRs in order to cope with transitions through local and international nongovernmental organizations and philanthropists. Thereby reducing their reliance on government and Library annual budget.

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## THE IMPACT OF CLIMATE CHANGE ON THE RURAL ENVIRONMENT AND AGRICULTURE IN NIGERIA

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### Abstract

*The impact of climate change on the environment and agriculture has received considerable research and policy attention. The far-reaching impact of climate change on the environment includes water resources and coastal infrastructure. These challenges also affect agricultural production, prices, trade, and food sufficiency. The objective of the paper is to assess the causes and effect of climate on the rural environment and agriculture production in Nigeria. The paper is qualitative in nature. Data are obtained mainly from secondary sources and addressed through content analysis. It advocates the need for adaptation practices with an emphasis on community interest to encourage sustainable development. Such practices are identified to include the prevention of grassland desertification, planting of crops according to prevailing climate condition, intensify ecological agriculture, and the adaptation of indigenous conservation practices.*

**Keywords:** *Climate change, Rural environment, Agriculture, Nigeria*

### Introduction

The concept and impact of climate change are not new. It has evolved several meanings, impacts and mitigation strategies. Basically, climate change occurs when changes in Earth's climate system result in new weather patterns that last for at least a few decades, and maybe for millions of years. The climate system comprises five interacting parts, the atmosphere, hydrosphere, cryosphere, biosphere, and lithosphere. The United Nations Framework Convention on Climate Change (UNFCCC) (2014) defines "climate change as a change which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere over comparable time periods".

The National Research Council (2010) explained that “human activities can also change the earth's climate, and are presently driving climate change through global warming”. There is no generally accepted position to the precise term to be used to refer to anthropogenically forced change; either "global warming" or "climate change" may be used (Hulme, 2016). The first describes the average effect on a global scale, whilst the second describes how different geographical regions are affected differently. Globally, seasons are shifting, temperatures are increasing and sea level is rising. Climate change affects the whole world though the vulnerable groups who contribute least to the process suffer most from the impact. Climate change remains a serious development threat globally with several negative impact on social and economic activities. Ezegwu (2014) maintained that “climate change is increasingly becoming a serious challenge to Nigeria's socio-economic development”. It leads to volcano, landslide, erosion, flooding, drought, pests and diseases. These factors in turn impact on agriculture and consequently threaten food security.

The world and Nigeria, in particular, are highly vulnerable to the impacts of climate change and must, therefore as a matter of urgency take steps to reduce vulnerability, build resilience and adaptive capacity. This paper attempts an assessment of the impact of climate change on the Nigerian environment an agricultural production.

### **Effects of climate change on the environment and agricultural production in Nigeria**

Olaniyi, Ojekunle and Amujo (2013) argued that “Climate change explains the change in the state of the climate that can be identified by changes in mean or variability of its properties and that persists for extended periods, typically decades or longer”. Climate change occurs when the amount of energy stored by the “climate system” is varied. The variation occurs when the balance, for example between energy received from the sun and the radiated energy is disturbed. This disturbance can be caused by a number of natural mechanisms such as variation in the earth’s orbit, variation in ocean circulation, and changes in earth’s composition. They opined that “in recent times the changes are occasioned by human activities” (Olaniyi, Ojekunle and Amujo, 2013).

A change in the type, distribution, and coverage of vegetation may occur given a change in the climate. “Some changes in climate may result in increased precipitation and warmth, resulting in improved plant growth and the subsequent sequestration of airborne CO<sub>2</sub>. The effects are expected to affect the rate of many natural cycles like plant litter decomposition rates” (Ochoa-Hueso, Delgado-Baquerizo, King, Benham, Arca, and Power, 2019). Also, “a gradual increase in warmth in a region will lead to earlier flowering and fruiting times, driving a change in the timing of life cycles of dependent organisms”. This means that cold will cause plant bio-cycles to lag. Larger, faster or more radical changes, however, may result



in vegetation stress, rapid plant loss and desertification in certain circumstances (Sahney, Benton and Falcon-Lang, 2010; Kinver, 2011).

According to Agbola and Fayiga (2015) "emission of greenhouse gases is responsible for global warming and subsequent climate variability". The emission of greenhouse gases from gas flaring, open burning, vehicle emissions, deforestation, and use of solid fossil fuel for cooking are some of the causes of climate change in Nigeria. Nigeria is still practicing rain-fed agriculture which renders her vulnerable to the adverse effects of climate change.

Odjugo (2009) disclosed that "the rise in global average temperatures since 1860 now exceeds 0.6OC. The effect of the GHGs concentration on global warming as at 2100 is estimated by three scenarios to be 1.5OC (Low), 2.5OC (Middle) and 4.5OC (High)". In Nigeria, while rainfall has decreased by 92 mm, the temperature increased by 0.8OC since 1960. However, Odjugo (2009) further maintained that this "has led to increasing evapotranspiration and water stress resulting in the drying up of rivers and lakes. For example, Lake Chad has reduced in size from 22902 km<sup>2</sup> in 1963 to 16884 km<sup>2</sup> in 1972 and 304 km<sup>2</sup> in 2000. While climate change will make some countries to experience an increase in water resources, the majority will face serious water stress".

A recent report by the Institute for Public Policy Analysis and Management (IPPAM)(2018), Nigeria reveals that by 2020, Nigeria stands to lose 11 percent of GDP to climate change in absence of aggressive climate policy to sustain the social and economic development in the country. Climate change will negatively affect the Nigerian economy with various observable impacts ranging from a significant reduction in agricultural productivity to increase in illness, morbidity and mortality rate. The energy sector has not also be left out because climate change has impacted the hydropower plants which are a source of electricity for the country (Salmat and Gideon, 2018).

In a study by SPORE (2008); Apata, Samuel and Adeola, 2009; Kurukulasuriya & Mendelsohn, 2006; IISD, (2007), it was argued that "the effect of climate change on agriculture is far reaching especially in low-income countries, where the climate is the primary determinant of agricultural productivity and adaptive capacities are low". Climatic changes affect agricultural productivity and rural livelihood in Nigeria. Extreme climatic events such as flooding, extreme heat, and drought have led to soil degradation which results in low crop yields. The decline in agricultural productivity discourages the farmers and may lead to change in livelihood especially in rural settings (Agbola and Fayiga, 2015). This can also lead to migration from rural to urban regions thereby affecting the development of the rural economy. This vulnerability has been demonstrated by the devastating effects of recent

flooding in the Niger Delta region of the country and the various prolonged droughts that are currently witnessed in some parts of the Northern region.

Equally, the contributions of Adams, McCarl, Segerson, Rosenzweig, Bryant, Dixon, Conner, Everson, Ojima, (1999); Manning and Nobrew (2001) showed that “direct effects of climate variables such as air, temperature, humidity, wind speed and other climate factors influence animal performance such as growth, milk production, wool production, and reproduction”. Niggol and Mendelsohn (2008) added that “climate can also affect the quantity and quality of feedstuffs such as pasture, forage, and grain and also the severity and distribution of livestock diseases and parasite”. Consequent upon this is poor access to potable water and low food production. The negative effects of climate change extends to food and water resources that are critical for livelihood in Africa where much of the population especially the poor, rely on local supply system that is sensitive to climate variation. Disruptions of existing food and water systems will have devastating implications for development and livelihood (Ayindea, Muchiea, and Olatunjib, 2011).

### **Mitigating strategies of climate change in Nigeria**

The concept of mitigation deals with measures that are taken by various nations to reduce the rate and magnitude of global climate change caused by human activities. According to the Intergovernmental Panel on Climate Change, United States (IPCC, 1988), efforts to mitigate the effect of climate change will include among other things, “reduction in the burning of fossil fuels and reduction of greenhouse gases and soot from the energy sector; reduction of deforestation; increase in reforestation and afforestation; modification of agricultural practices to reduce emissions of greenhouse gases and build up soil carbon”. The panel disclosed further that other mitigation options include “geo-engineering to reverse the effect of global warming by creating cooling effects which will offset greenhouse heating, and conceiving the development of technology for clean the greenhouse gases from the atmosphere”. It has been estimated that at present the cost and benefit of mitigating global warming are approximately the same. In general, the IPCC concludes, without mitigation global warming will reach a point where it will be impossible for some natural systems such as ecosystem to cope and therefore may go into extinction (Olaniyi, Ojekunle and Amujo, 2013).

As a strategy of mitigating the effect of climate change so as to promote the environment and sustain food production in Nigeria, the Revised African Union Convention on the Conservation of Nature and Natural Resources (2000) speaks directly to the environmental crisis in Nigeria. They identified policies, programs as well as regulatory agencies dealing with these matters which are already in existence at the national, state and local government levels. They maintained that various arm of government should ensure policies that support the use of more clean, renewable energy, rather than the heavy investments in coal-based

energy, which has not helped the economy, as irregular inconsistent power supply still persists across the country, with several businesses paralyzed (Salmat and Gideon, 2018).

There is a need to adopt improved agricultural systems for both crops and livestock. One of the ways of doing this is the diversification of livestock and improvement in range management; increase access to drought-resistant crops and livestock feeds; adopt better soil management practices, and provide early warning/meteorological forecasts and related information. As an institutional effort, the River Basin Authority should design and construct new water projects for drought management and irrigation farming. The construction should have the capacity to protect existing natural barriers, build sea walls and dune reinforcement. Furthermore, Salmat and Gideon (2018) emphasized that,

1. The use of low-cost solar energy cookers instead of wood-burning devices which cause deforestation should be encouraged. Terrestrial and marine ecosystems that act as carbon sink reservoir to greenhouse gases should be protected and sustained by reducing bush burning and increasing afforestation with appropriate sanctions against bush burning activities.
2. Oil spillage and gas flaring in the coastal regions should be addressed to protect the carbon and ozone layers. Realignment, relocation and design of standards and planning for roads, rail and other infrastructure are paramount to cope with warming and drainage effects.
3. Government and relevant stakeholders should extensively fund research in climate change in tertiary institutions and other research institutes across the nation. Efficient database management system on climate change occurrence and related events should be developed, in order to ensure effective and timely response to climate change incidents in Nigeria.
4. The Civil Society Organisation should ensure citizen engagement in achieving the incorporation of climate risks, the role of disaster risk reduction in climate adaptation strategies. The government should include CSOs in decision making regarding climate change adaptation.
5. The Civil Society should persuade both the executive and legislative arms of government to ratify and domesticate the revised convention.
6. They should create a platform for monitoring key performance indicators in the convention and making periodic reports on this as a form of an independent oversight role in the implementation of the convention in Nigeria.

7. Indiscriminate bush burning receives little or no thought and yet damage the soil, plants, animals and general ecological balance is immense. Unregulated hunting of wild animals for food has led to the extinction of many species and those remaining are facing the same faith if nothing is done to rescue them. Even more worrisome is a general hostility to anything wild that seem to immediately provoke an extermination mentality, even when no threat is visible. This mental frame ought to change and the civil society should collaborate with the relevant public authorities engage for this change in mentalities through public enlightenment.

### **Conclusion**

Climate change is a reality. Therefore, like many other nations of the world, the Nigerian government must rise to the challenge by taking proactive steps to mitigate the effect and protect the environment as well as enhance food security for her teeming population. The mitigation options should start with the gas flaring and oil pollution in the Niger Delta which should be tackled with all the force of government and stopped forthwith. Sustainable agriculture must be driven to meet the increasing demand for food for the growing population in Nigeria.

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## THE ADOPTION OF TECHNOLOGICAL ENTREPRENEURSHIP VENTURES IN DEVELOPING NIGERIA SMALL AND MEDIUM SIZED ENTERPRISES

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### **Abstract**

*The concept of technological entrepreneurship has gained attention among researches, government and firms alike, but very little of it can be said to exist in Nnewi Commercial town of Anambra State, Nigeria. Most entrepreneurial activities are concentrated in non-technological priorities. This is because most technologies are foreign and imported. This study therefore seeks to provide means of developing technological entrepreneurial with supporting policy directions. The concept is defined as the process by which entrepreneurs assemble organizational resources, technical systems and the strategies by entrepreneurial firms to pursue opportunities. In this study, we noted that technological – entrepreneurship involve a process of problem-solving, raising and safe-guarding the quality of life, needing technical skills, identifying potential market improvement in quality of products in order to improve competitiveness of the firm with expectation of saving in-process cost. The study also examined the factors affecting the adoption programmes in Nnewi commercial town and established a strong relationship between cross cultural variables and technological entrepreneurship. The study noted several challenges to operate successfully such as ICT policies, infrastructural development to promote business and technological and product promotion. These challenges were attributable to inadequate resources, expensive patents and unavailability of equity. In the light of this and in order to overcome the major barriers, we recommended for the development of Nnewi Technological Park, adoption of effective communication channels, explore technology outsourcing possibilities. In addition, we recommended that governments at all levels should support for basic science in universities with the purpose of advancing science and technology and sustenance of global economy. Future research should include studies on Technology Parks which should focus on the institutional or managerial weaknesses undermining their potential growth.*

**Keywords:** *Technological Entrepreneurship and Adoption Processes*

## **Introduction**

Technological Entrepreneurship is a key source of economic and social progress. It refers to the creation of new firms by independent enterprise to exploit new technologies and create jobs and wealth, contributing to the well-being of the people. According to Mowery et al (2002), it has the potential of improving state of technological capability and needed to propel technological innovation. Bubou et al (2010) opined that Technological Entrepreneurship is a platform that accelerate the diffusion of information technology in the economy. The diffusion in turn has greatly enhanced the quality of life of the citizenries. The concept of Technological-Entrepreneurship has gained more attention among researchers, policy-makers, government, scholars and business enterprises alike. From present study, very little technological-Entrepreneurship can be said to exist in Nigeria. Most entrepreneurial activities in Nigeria are concentrated in non-technological priorities, because most technologies are foreign and imported.

Technological Entrepreneurship ventures have become an important asset for many countries, and it is the source of achieving competitive advantage. These advances are driven by strong demands from entrepreneurs enhancement effectiveness and cost containment (Buckley et al, 2004).

In Nigeria today, technological entrepreneurship ventures are not adequately given the attention needed due to its invisible impact in wealth creative and employment generation. Most individuals look at micro entrepreneurial ventures to be the most critical factors that would help both urban and rural population for the creation of jobs and reduction of unemployment and poverty among the citizenries. In essence, technological entrepreneurship venture in Nigeria should be about recognizing the key role entrepreneurs play in fostering wealth and well-being of ordinary people, because entrepreneurs are supposed to be enablers of growth who help break-down economic barriers and social constraints.

## **Research Problem**

Most developed countries have formulated policies to make it easier to start small scale business. These policy changes have benefitted many young entrepreneurs. Klonowski (2007) noted that countries that ranked highest on its ease of doing business are associated with higher percentages of entrepreneurs. The author revealed that Nigeria entrepreneurs have enormous potential to bring prosperity and encouraging them are very important. In this study, it is imperative to explore whether there are relatively technological incubator system to encourage the entrepreneurs and to find out why Nigeria is not fully aligned with global initiatives to adopt the new technology in its entrepreneurship ventures. This has a direct influence on the formulation and implementation of policies and support programmes that could be one of the main causes of poor performance with regard to technological –



entrepreneurship venture. This could be a unique challenge facing the development of entrepreneurial activities in Nigeria.

### **Objectives of the Study**

This study seeks to identify what technological entrepreneurship skills are required to develop a growth oriented enterprises in Nnewi commercial town of Anambra State, Nigeria and how these skills might be enhanced. To achieve this noble objective, the study focuses on conceptualizing technological entrepreneurship and to provide necessary data on the Nnewi Commercial town.

To achieve this objective, the following specific objectives were formulated:

1. Define entrepreneurship development within the Nigeria context.
2. Obtain insight into the dynamics of entrepreneurship by means of literature review.
3. Empirically examine entrepreneurship activities based on a structured questionnaire.
4. Determine what motivate entrepreneurs in Nigeria.
5. Determine the unique challenges entrepreneurs face in managing their enterprises.
6. Suggest practical recommendations to enhance entrepreneurship development.

### **Research Questions**

Based on the objectives of the study, the following research questions were formulated to guide the study;

1. How does the technological entrepreneurship ventures impact on the entrepreneurial activities?
2. What are the challenges of adopting technological entrepreneurship development programme(s) in Nnewi commercial town?
3. How do we assess the impact of Technological Entrepreneurship on small and medium sized enterprises in Nnewi commercial town?

### **Research Hypothesis**

Based on the research questions, the following hypothesis was formulated;

- (1) Ho: There exist a significant performance in the small and medium scale enterprises activities on the impact of Technological Entrepreneurship ventures.

This study explores the impact of technological - Entrepreneurship ventures on small and medium sized enterprises with a view to proffer solutions to problems and issues. The study intended to examine the existing literature available and to develop an understanding of entrepreneurial practices.

### **Review of Related Literature**

A philosophical approach to adopting technological entrepreneurship venture is regarded as a valuable resource which should be managed like other resources and should contribute to

accomplishing the enterprise goals and objectives. This study emphasizes that technological entrepreneurship ventures should be adopted as one of the instrument to support entrepreneurial development.

Technological entrepreneurship is defined as a style of business leadership that involves identifying high potential technology-intensive commercial opportunities, gathering resources such as talent, capital, managing rapid growth and significant risk using principled decision-making skills (Dorf and Dyers, 2007).

Shane and Venkataraman (2003) defined it as the process by which entrepreneurs assemble organizational resources and technical systems to pursue opportunities. Aderemi et al (2018) positioned technological entrepreneurship as being needed to make full use of the knowledge of science and technology available in meeting market needs, thereby making the nation more productive and competitive internationally. According to European Commission (2008), noted that the aim of entrepreneurship development should be to develop entrepreneurial capacities and mindsets that benefit economies by fostering creativity, innovation and self-employment.

Scase (2000) opined that government across the globe have needs to recognize the positive impact entrepreneurship development on employment generation as well as the competitive advantages that small firms bring to the market place. While entrepreneurship provides benefits in terms of social and economic growth, it also offer benefits in terms of individual fulfillment. The benefits of technological entrepreneurship cannot be overemphasized and the realization of this could be said to be the motivation behind government expenditure toward the programme(s). Raghavendra et al (2006) noted that the economic performance of most enterprises are determined by technological capability and that high technology incubators are necessary for creating wealth and jobs. Technology based enterprises are referred as enterprises that engage in technological related products processes and services. Cooper (2006) noted that high technological sectors are perceived as major sources of future economic prosperity and employment growth.

Evidence from literature shows that most small and medium sized enterprises are hindered by access to technology know-how and technology skill required by the entrepreneurs to develop their enterprises (Egbetokun et al, 2010). To foster entrepreneurship ventures, the Nigeria government over the past years attempted to develop programmes to assist entrepreneurs, such programmes as;

1. Youth Empowerment Scheme (YES).
2. National Open Apprentice Scheme (NOAS).
3. Small and Medium Enterprises Development Agency of Nigeria (SMEDA).
4. National Economic Empowerment and Development Strategy (NEEDS).

#### 5. Small and Medium Enterprises Equity Investment Scheme (SMEEIS).

These programmes have greatly assisted the development of small businesses in Nigeria. However, it is noted that underdeveloped physical and infrastructures have created constraint to SMEs growth. Most SMEs rely heavily on inefficient outdated technology, poor electricity supply and water availability and cannot afford the cost of developing any alternatives. In addition, inadequate investment in human capital hampers SMEs growth. In more challenging environment, the SMEs are aware of the need to become more resilient and competitive in the face of economic changes. The continuous changes that affect the business environment due to globalization process and technology innovations have forced many SMEs to constantly look for new competitive advantage in order to maintain and improve their market position (Aremu, 2004). Evidence has shown that the Nigerian government has attempted to adopt IT development programme(s) as one of the instrument to support entrepreneurial development programme. Most of the programmes have shown positive impact on the performance of entrepreneurial activities. Because of these successes, the importance of entrepreneurial activities to national economies have been widely recognized. The general argument is that by their very nature, entrepreneurial activities are highly innovative and extremely impactful as far as national economic development is concerned. As noted by Babou and Okrigwe (2011) technological Entrepreneurship and innovation are the twin pillars of socio-economic factors in the modern era. To date, several information studies have explored the subject of innovation in entrepreneurial activities, but the extent to which IT influence on entrepreneurial activities performance is a question for empirical investigation.

Literature indicates that technological has revolutionized the way enterprises conduct their businesses. Entrepreneurs should consider adopting technology in their planning processes as this would allow them to create operations using the best technology available. Studies have shown that technological innovation drives competition if entrepreneurs keep following the path of continuous technological innovative entrepreneurial development programmes. Inventions and technological innovations have proven to be crucial components for the development of modern societies. The greatest economies of the world today and emerging nations are driven by technological inventions, a situation that has led to the near non-existent productive capacity with very minimal potential.

It is essential to determine the factors that might inhibit entrepreneurial activity taking into consideration the large contribution entrepreneurs make to the economy. Richard etal (2004) commented that many entrepreneurs suffer from significant material constraints, while Kock (2008) suggested that mentoring is one method of providing support to entrepreneurs which can be very effective as it address the specific problems faced by individual entrepreneurs. The support include individual as well as group based assistance directed at specific problems

where mentors serve as role models. Brindley (2005) noted that identifying the most effective way of reducing the barriers entrepreneurs face require a number of initiatives such as encouraging micro financing and youth empowerment movements as keys to peace and prosperity.

Thaddeus (2012) noted that the Nigeria government never loses sight of the tripartite relationship between entrepreneurship, industrialization and economic growth which have resulted to the implementation of many programmes. The programmes have assisted SMEs in so many ways, though, they all have their own problems that militate against its successful implementation. Katila and Ahuja (2002) noted that SMEs success in technology driven enterprise critically depends on the ability to invent and to bring innovative technology to the market. As pointed by Rosenkopt and Nerker (2001) that any enterprise with the ability to create new technological knowledge have been acknowledged for generating and acquiring internal as well as external sources of knowledge management.

However, there are challenges of adopting technological entrepreneurship. One of the major challenges are related to allocating capital for their operations, poor legal and taxation, infrastructure deficits, corruption and untested market. In addition, it has been difficult to commercialize knowledge and ideas from researchers in the nation's universities and other research institutions to value added innovative products, processes and services. In the same vein, Aribaba (2013) noted that entrepreneurial development programmes have contributed significantly to SMEs growth and their impact include increase business income, accelerated business growth, improved productivity and increased sales.

### **Methodology**

The study made use of cross-sectional survey design. The study areas were Nnewi commercial town in Anambra State, Nigeria. The choice was based on its strategic location as the commercial nerve centre of Anambra State. The questionnaire used was divided into the following sections;

1. Entrepreneurs values and factors that motivated or demotivated them to start a business.
2. Social and cultural attitudes to entrepreneurship.
3. Constraints in the overall business environment.
4. Challenges to access finance.
5. Government efforts to combat corruption.
6. Business support services available to entrepreneurs.

The face-to-face interview took an average of 30 minutes with the entrepreneur and the sampling frame was SMEs listed in the Anambra State Chamber of commercial directory. Using the frame, 150 randomly selected SMEs were picked. The survey covered both young

and adult entrepreneurs to understand differences between these groups in terms of personal characteristics, skills, social network, views on the adoption of technology. The survey was supplemented by five focus group discussions and potential young entrepreneurs served as control group. The use of focus group discussion was aimed at gaining insights into specific drivers of entrepreneurs, such as the value system, societal attitudes to entrepreneurship and general factors and institutions that motivate and support entrepreneurs in Nnewi commercial town.

### **Measurement Instruments**

The measurement methods adopted in this study were drawn from literature. For all concepts, we asked respondents to rate their level of agreement with statements using 5-point scales. The measures of relative advantage, compatibility and security were adapted from Ala metal (2007). Respondents were asked to indicate the extent their enterprises feel ready to adopt technology. The responses were obtained on a five point Likert scale.

The measurement of reliability provided consistency in the measurement of variables. The internal consistency reliability was the most used psychometric measured assessing variables instrument and scales (Zhang etal, 2000). Cronbach alpha was adopted for determining the reliability based on internal consistency (Kim and Cha, 2002). The alpha values for relative advantage yielded reliability coefficient of 0.784. This value exceeded the minimum standard of 0.70 set by Nunnally (1978). This value of 0.784 generated a strong indication that there was an internal consistency in the measurement. The constructs were therefore deemed to have adequate reliability.

For content and construct validity, the content validity, for the study represented the adequacy with which a specific domain of content had been sampled. The questionnaire was based on extensive literature survey and opinions of experts, demonstrated content validity.

### **Methods of Data Analysis**

Data collected from questionnaire distributed were coded and analyzed using frequency distribution table while non parametric statistical test ANOVA was used to test the formulated hypothesis using SPSS version 21. The items were designed using the Likert scale format to elicit responses on the impact of five independent variables and one dependent variable, profitability as a measure of SMEs performance.

**Table 1:** Level of Participation in Technological Entrepreneurship Ventures

	<b>Responses - Awareness</b>	<b>Frequency</b>	<b>%</b>
(a)	Not aware of the programme(s)	34	23.45
(b)	Lack of communication	23	15.86
(c)	Not interested	25	17.24
(d)	No benefit attached to the programme	21	14.48
(e)	Aware of the programmes	42	28.97
	<b>Total</b>	<b>145</b>	<b>100</b>

**Table 2:** Number of SMEs Participation

	<b>Enterprises Performance</b>	<b>Frequency</b>	<b>%</b>
(a)	Water processing	14	9.66
(b)	Food and juice enterprise	21	14.48
(c)	Block-making	28	19.31
(d)	Furniture making	17	11.72
(e)	Garment making	13	8.97
(f)	Metal Fabrication	18	12.41
(g)	Soap making	15	10.35
(h)	Bakeries	19	13.10
	<b>Total</b>	<b>145</b>	<b>100</b>

Source: Field Survey

**Table 3:** Consumers' Patronage of the Enterprises Products with Technology Adoptability

	Consumer 's Responses	Enterprises	Consumer s' Responses								Total
			1	2	3	4	5	6	7	8	
1	Excellent	Water processing	2	1	3	3	1	3	2	3	18
2	Very good	Food and juice enterprise	2	2	2	1	3	4	3	4	21
3	Good	Block making	3	1	3	4	3	2	3	2	20
4	Very encouraging	Furniture making	4	2	2	2	2	2	1	4	19
5	Encouraging	Garment making	2	2	3	1	4	3	2	2	18
6	Not encouraging	Metal fabrication	2	3	2	2	2	3	1	0	15
7	Low	Soap making	1	1	2	3	1	3	2	3	16
8	Very low	Bakeries	2	3	2	4	2	1	2	2	18
	<b>Total</b>		<b>18</b>	<b>15</b>	<b>19</b>	<b>20</b>	<b>18</b>	<b>21</b>	<b>16</b>	<b>18</b>	<b>145</b>

**Table 4:** Means, Standard Deviation and Matrix Correlations

	Variable	Mean	S.D	1	2	3	4	5	6	7	8	9
1	Perseverance	5.84	1.36									
2	Opportunity recognition	5.65	1.24	0.82								
3	Eaxtrovertedness	5.92	1.48	0.71	0.23							
4	Materialistic	4.75	1.39	0.62	0.21	0.06						
5	Creativity	4.84	1.42	0.53	0.24	0.18	0.09					
6	Improvisation	4.36	1.35	0.48	0.25	0.18	0.18	0.06				
7	Adaptation	3.08	1.24	0.38	0.24	0.18	0.12	0.02	0.01			
8	Enthusiasm	3.39	1.18	0.35	0.26	0.14	0.18	0.16	0.15	0.01		
9	Self-confidence	3.84	1.21	0.32	0.25	0.21	0.20	0.10	0.18	0.16	0.15	0.17

$R^2 = 0.638$

Adjusted  $R^2 = 0.635$

$\Delta R^2 = 0.031$

F - Value = 7.56

N = 145

\*P < 0.01, \*\*P < 0.05

Table 4, above presents the mean, standard deviation and the matrix correlations for the above variables. From the analysis, we found that extroverted entrepreneurs had high inclination towards technological entrepreneurship development than other variables in the scale, followed by perseverance and opportunity recognition. The change in  $R^2$  was found to be significant. The results of the analysis demonstrated the role of technological entrepreneurship to the growth of small and medium scale enterprises in Nnewi commercial town of Anambra State, Nigeria.

The researcher also conducted an exploratory study to develop range of personal traits that Nnewi entrepreneurs possesses. Based on the interviews with business people and experts in Nnewi culture, a plottors of train were specified such as perseverance, materialistic, opportunity recognition and extrovertedness. Among these traits, the exploratory study indicated that extrovertedness was vital to the development of entrepreneurial activities and that it assisted to build network and relationship which was important for doing business in Nnewi Commercial town.

### Discussion

The purpose of this study was to examine the need for the adoption of technological entrepreneurship venture impact on small and medium sized enterprises located in Nnewia commercial town, of Anambra State, Nigeria. We hypothesized performance in the small and medium sized enterprises activities on the impact of technological Entrepreneurship ventures.

We found positive relationship, this relationship could be attributed to the increasing demands for quality products from the entrepreneurs by the adoption new technology. The adoption of technology was considered as the most avenue of shaping entrepreneurial activities. This result is consistent with the study done by Charney and Libecap (2003) and Souitaris, Zerbinati and Al-Lahan (2007) which showed that the adoption of technology enhanced the growth of small and medium sized enterprises. The findings of this study added to the body of technological entrepreneurial study regarding to the impact of technology to the growth of Nnewi small and medium sized enterprises. The findings of the study shed some insights of the current issues on technological Entrepreneurship development programmes in Nigeria settings.

### **Limitations and Future Direction**

Like other empirical studies, this study had some limitations. The samples used consisted of only SMEs located in Nnewi commercial town of Anambra State, Nigeria which limited the generalizability of the results. The sample size itself was relatively small. The study can be strengthened by increasing the sample size and including participants in other geographical areas. With an increased sample size, a more detailed empirical analysis among the independent variables and the variables that have multiple categories can be performed.

### **Research Implications**

This study presented the need to adopt technological entrepreneurship ventures in Nnewi small and medium sized enterprises. This study can serve as a starting point for other studies on adoption research, while encouraging further exploration and integration. Future research needs to focus on a larger cross section and more diversified random samples to verify the findings of the current study. Future inquiries could also examine the causal relationship between factors and SMEs perceived overall technology adoption by employing a structural equation modeling technique.

### **Conclusion**

In general, Nigerians perceived corruption as a widespread phenomenon and in fact, a normal part of daily business activities. In the study, more than 85% of respondents considered corruption to be a major issue that needs immediate attention of the policy makers action. Many of the respondents thought that the government could do more to increase transparency and accountability in the SMEs activities. Entrepreneurs cite access to finance as a key obstacle to their performance. Lack of collateral was another reason for credit denial, follow by poor business plan. The respondents interviewed had mixed emotions about technological entrepreneurship adoption process and noticed that young Nnewi entrepreneurs were drawn to entrepreneurship out of necessity to escape unemployment, poverty and to build livelihood and were motivated by the possibility to realize their vision and contribute positively to the development of their communities. The study noted that technology entrepreneurship



ventures in Nnewi commercial town faces huge challenges to operate successfully. The major hurdles include ICT inadequacy, lack of adequate infrastructure to promote business and product promotion.

Future study should include areas of technology parks which should focus on their institutional or managerial weaknesses undermining their potential growth. Research on public-private partnership and their impact on technological entrepreneurship should be established.

### **Recommendations**

Based on the findings of this study, the following recommendations were suggested;

1. Fundamental changes need to be made to the educational system with courses on entrepreneurship and problem solving skills, featuring prominently at all levels.
2. Establish enabling entrepreneurship framework conditions. Government needs to continue to accelerate the ongoing reforms of the business environment, especially those aimed at easing regulations.
3. More innovative financial instruments need to be created. These instruments should take into account higher uncertainty and risk.
4. Young people should be linked with and learn from established entrepreneurs through professional networks and mentoring programmes.
5. Need to extend from the nascent entrepreneurship into early entrepreneurship stages and beyond.
6. Young entrepreneurs need to be well informed about regulatory requirements they need to meet in order to start business or obtain loan.

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