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**International Conference on
AFRICAN DEVELOPMENT
STRATEGIES**

CONFERENCE PROCEEDINGS

Theme:
Addressing Africa's Development
Challenges in the 21st Century

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THEME

Addressing Africa's Development Challenges in the 21st Century

DATE: Wednesday 16th - Thursday 17th November, 2022

TIME: 10:00 am

CONFERENCE LOC

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DAY ONE – Wednesday 16th November, 2022

OPENING SESSION/PLENARY

Conference Registration	- 8:00am – 9:00am
Opening Prayer/Welcoming Remark	- 9:00am – 9:15am
Institutional Brief/Chairman's Opening Remark	- 9:15am – 9:30am
Research Training	- 9:30am – 12noon
Launch Break/Group Photograph	- 12noon – 1:00pm
Plenary Session	- 1:00pm – 4:00pm
Policy Review Session	- 4:00pm – 5:00pm

DAY TWO – Thursday 17 November, 2022

OPENING SESSION/PLENARY

Conference Registration	- 8:00am – 9:00am
Opening Prayer/Welcoming Remark	- 9:00am – 9:15am
Institutional Brief/Chairman's Opening Remark	- 9:15am – 9:30am
Research Training	- 9:30am – 12noon
Launch Break/Group Photograph	- 12noon – 1:00pm
Plenary Session	- 1:00pm – 4:00pm
Policy Review Session	- 4:00pm – 5:00pm

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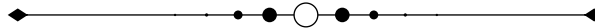




A Comparative Study of Year 2022 First Quarter Road Traffic Crashes Within the Geo-Political Locations in Nigeria

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Abstract

This research paper was aimed at analyzing the year 2022 First Quarter Road Traffic crashes within the six geo-political locations in Nigeria. Objective of the study were: to determine the major causative factors responsible for road traffic crashes; to assess the influence of vehicle category on causative factors of road traffic crashes; to evaluate the degree of dependence of causative factors of road traffic crashes on the geo-political locations and to examine the level of spatial variations of road traffic crashes within the six geo-political locations. Secondary data were obtained from the Federal Road Safety Commission and National Bureau of statistics First quarter (Q1) of year 2022 Road Transport Data Report. These obtained data were subjected to both descriptive and inferential statistical analysis such as Chi-Square (X^2) and Analysis of Variance (ANOVA). The result shows that speed limit violation (59.79%), Wrongful Overtaking (6.77%) and Sign Light violation (5.67%) were the leading causative factors for road traffic crashes within the entire geo-political locations. The X^2 analysis revealed that road traffic crashes were influenced by the category of vehicle and also dependent on the geo-political locations with calculated value of 24,632 and 479.36 greater than ($>$) table Value of 27.59 and 107.52 respectively @ 0.05 significant level. Furthermore, the ANOVA result showed that road traffic crashes spatially varies within the geo-political locations with a calculated value of 2.48 $>$ table value of 2.28. It was recommended that more stringent measures be put in place by concerned authorities, agencies and stake holders towards incessant speed limit violation which was the leading causative factor responsible for road crashes.

Keywords: *Crashes, Traffic, Speed limit, Road and Locations*

Background to the Study

The available data of road traffic crashes across the world generated at the local, national and international levels had portrayed road transport as one of the leading cause of human disaster. This is due to the number of deaths and injuries which are associated with road traffic crashes. Road traffic has turned out to be one of the major concern for human existence since the invention of motorized vehicle and road way transport. According to world health organization (WHO,2018), road traffic crashes is eight most common means of death for all age groups. The trend for most of these traffic accident occurs in low and middle-income countries which account for over ninety percent of traffic accident fatalities (Hazaymeh, Almagbile and Alomari, 2022).

In developing countries such as Nigeria, road traffic accidents has become one of the leading course of death and fatalities, Nigeria is ranked as the second highest in terms of road crashes among 193 countries of the world (Agbokhese, et al. 2013). In order to reverse this negative trend of road traffic crashes in Nigeria, the Federal Road safety Commission (FRSC) was established in 1988 and charged with the mandate of reducing the alarming rate of regular road traffic crashes as well as generating road traffic data in collaboration with National Bureau of Statistics. Despite this effort, results has shown that the country is yet to win the war of incessant road traffic crashes on our roads. This calls for an in- depth analysis of this quarterly and yearly road traffic data which are being generated by these agencies. It is strongly believed that available data when subjected to a more in-depth analysis will likely exposed diverse variables which may be responsible for these incessant crashes and on our major highways.

Literature Review

Several studies have been conducted in relation to road traffic accident using diverse methodologies and their results published. Rahman, Jamal and Al-Ahmadi (2020) examined hotspots of traffic collisions and their spatial relationships with land users with Geographic Information System (GIS) using geographically weighted regression approach in Damman, Saudi Arabia. Their results showed that fatal and injury crashes were mostly located within residential neighborhoods and near public facilities with relatively higher speed limits.

Owusu, Eshun, Asure and Aikins (2018), Studies road traffic accident hotspots in Cape coast metropolis, Southern Ghana using Geographic Information System (GIS). Their outcome released nine major hotspots within the study area. Yunus and Abdulkarim (2021), studied Traffic Accident and Emergency Response Optimization in Kano Metropolis, Nigeria. The result revealed a variation in the distribution patterns, emergency health care facilities ambulance and accident spots. Gumah (2015) in his Investigation of Spatial-Temporal Analysis of Road Traffic Accident on the Accra-Tema Motorway in Ghana, observed that accident along the route clustered at point of road intersections and areas associated with high commercial activities and concentration of human population. Odinfono, Adesina and Adeoye (2020) in their study examined the road way characteristics of road traffic crashes black spots along Akure –Owo highway between 2012-2016 using spatial model for assessing the spatial dimension for road safety management. Outcome of their studies showed that there

is a statistically significant clustered pattern in the occurrence of road traffic crashes along the route. The study also found out that most potent road factors in the incidence of road traffic crashes are within the intersections, road curvature, and slope along the route. Isa and Siyan (2016) analyzed factors responsible for road accident along Kano-Kaduna –Abuja dual carriage way using category model. It was discovered that most of the vehicles responsible for crashes on the highway lacked routine repairs, maintenance together with the existence of potholes.

In a study by Samuel and Amini (2021) in Rivers state Nigeria among commercial drivers concerning determinant of road accident using a cross –sectional survey design, it was found that age and drug use were major significant predictor of road traffic accident among commercial drivers. Furthermore, Oguagbaka (2019) carried out a statistical analysis of road accident in Anambra state, Nigeria from 2014-2017 using secondary data obtained from Anambra state statistical year book. These data which were subjected to Kruskal- wallis statistical tool showed that serious accident was the most experienced category of accident suffered within the study area.

Oyetubo, Afolabi and Ohida (2018) in their investigation of road traffic safety in Minna, Niger state, Nigeria using data obtained through questionnaire and secondary data obtained from the Nigerian police force and the Federal Road Safety Commission. It was revealed in their result that male involved more in road accident than female within the state while private cars are more prone to accident than commercial taxis. Despite all these studies by renowned researchers and scholars on road traffic accidents using diverse approaches, non is yet to focus on the comparative study of first quarter of year 2022 road accident data report which was released by Federal Road Safety Commission and the National Bureau of statistics. It is on this base that this research was embarked upon in other to carry out an in depth study in order to fill this yearning gap.

Aim and Objectives of the Study

This study was aimed at giving an in-depth and comparative analysis of the first quarter of year 2022 road traffic data within the six geo-political locations of Nigeria. In order for this aim to be achieved the following objectives were set as guides for this study viz:

1. To determine the major causative factors responsible for road traffic crashes
2. To access the influence of vehicle category on causative factors, of road traffic crashes
3. To evaluate the degree of dependence of causative factors of road traffic crashes on geo-political locations
4. To examine the level of spatial variation in road traffic crashes within the six geo-political locations.

Materials and Methods

Secondary data needed for the study were obtained from Federal Road Safety Commission and National Bureau of statistics on road traffic data (First Quarter of 2022). These data were subjected to both descriptive and inferential statistical analysis such as Chi-Square (χ^2) and one-way Analysis and Variance (ANOVA). The Chi-Square Statistical tools was used to investigate the influence of vehicle category on causative factors of road traffic crashes as well

as the degree of independence of causative factors of road traffic accident on the six geo-political locations in Nigeria. One-way ANOVA was used to examine the degree of spatial variations of road traffic crashes within the six geo-political locations.

The formula for Chi-Square(χ^2) is presented as follows:

$$X^2 = \sum(O-E)^2 / E$$

Where O= the observed value or distribution

E= the expected value or Distribution

While the formula for the one-way ANOVA is presented as:

$$F = MSB \div MSW$$

Where F(f-statistics or f-ratio) = Coefficient of ANOVA

MSB =Mean Sum of square between the groups

MSW=Mean sum of square within group

Result and Discussion

Table 1: Causative Factors for road traffic crashes within the geo-political locations

Causative Factor/Geo-political location	South-South	South-West	South-East	North-West	North-East	North-Central	Total	Percentage (%)
Dangerous Driving	6	59	3	31	44	86	229	5.35
Break Failure	27	67	39	4	0	51	188	4.39
Sleeping on Steering	0	1	0	0	0	13	14	0.33
Bad Road	0	1	0	2	8	3	14	0.33
Dangerous Overtaking	0	1	0	2	2	0	5	0.12
Sign Light Violation	28	8	33	15	40	119	243	5.67
Use of phone while Driving	1	0	0	1	0	4	6	0.14
Driving Under Alcohol	0	5	1	0	0	3	9	0.21
Road Obstruction Violation	3	1	5	4	6	14	33	0.77
Fatigue	0	10	1	5	3	23	42	0.98
Route Violation	10	64	5	22	21	61	183	4.27
Wrongful Overtaking	24	58	28	39	58	83	290	6.77
Speed Violation	205	661	87	464	275	869	2561	59.79
Poor Weather	0	0	0	0	0	0	0	0.00
Over loading	2	8	1	17	6	8	42	0.98
Tyre Burst	22	59	12	36	28	66	223	5.21
Mechanically Deficient Vehicle	8	29	1	3	8	23	72	1.68
Others	3	38	1	20	2	65	129	3.01

Source: Authors computational Analysis 2022 from NBS/FRSC (First Quarter of 2022 Road Traffic Data)

The data presented on table 1 showed different causative factors responsible for traffic crashes within the geo-political locations. Among these factors, speed violation was leading causative factor responsible for road traffic crashes within the entire geo-political locations with 59.79%. Other major causative factors responsible for traffic crashes were wrongful overtaking and sign light violation with 6.77% and 5.67% respectively.

Table 2: Summary of X^2 showing influence of vehicle category on causative factors of road traffic crashes

Cal. X^2	df	Crit X^2	Sign Level
24.632.52	17	27.59	0.05

Source: Authors Computational Analysis, 2022

The Table 2 above, which is the summary of Chi-square showing the influence of vehicle category on causative factors of road accident. The result showed that the calculated value of 24.63 was greater than the table value of 27.59. This means the category of vehicles such as car, motor cycle, tanker, bicycle etc, indeed influence the causes of road traffic crashes experience on road within the geo-political locations. It therefore calls on those concern agencies to put more safely measures on some category of vehicles that have the highest tendency for road crashes. Moreover, this agrees with Oyetubo, Afolabi Ohida (2018) in their investigation of road traffic safety which revealed that private vehicles are more prone to road crashes than commercial vehicles.

Table 3: Summary of X^2 showing the degree of dependent of causative factors on traffic crashes on geo-political locations.

Cal. X^2	df	Crit. X^2	Sign. Level
479.36	85	107.52	0.05

Source: Authors statistical Analysis, 2022

The above Table 3 showed that causative factors of road traffic crashes are dependent on different geo-political locations. This point to the fact that some geo-political location may be more prone to road crashes than others as a result of some inherent factors such as the terrain, cultural, religious background etc. This may of course influence some geo-political locations to be more prone to road traffic crashes. It therefore calls for a more critical look at these inherent factors within the six geo-political locations that may specifically trigger more traffic crashes than other locations.

Table 4: Summary of ANOVA showing the level of spatial Variations in road traffic crashes.

	Difference or Sum of Squares	Degree of freedom	Variance estimate	F- Value	Cal. Value	Sign. Level
Between Sample	64,770.48	5	129544.09	2.28	2.48	0.05
Within Sample	533,016.46	102	5225.65			
Total	597,786.94	107	18,179.747			

Source: Authors computational Analysis, 2022

Table 4 above showed the summary of the level of spatial variations in road traffic crashes within the six geo-political locations. The result revealed that traffic crashes indeed varies significantly within the geo-political locations in Nigeria. The reason being that, the calculated value of 2.48 was greater than that of the table of value of 2.28, at 0.05 level of significance. This means that causative factors responsible for road crashes vary within the existing political location. In this case, in tackling the menace of road crashes, there is needed to consider the peculiar attributes associated with each geo-political location of the country. This may be attributed to the fact that causative factors of road traffic crashes might have been influenced by the terrain and other socioeconomic characteristics of each geo-political location within the country.

Conclusion/Recommendation

This study focused on comparative analysis of year 2022 first quarter road traffic crashes with the six geo-political locations in Nigeria. The findings of this study revealed that speed violation was the leading causative factor responsible for road traffic crashes within the geo-political locations. The study also showed the causative factors of road traffic crashes were highly influenced by vehicle category based on the X^2 analysis. Furthermore, X^2 analysis showed that causative factors of road crashes are highly dependent on the geo-political location. Moreover, the ANOVA result revealed that causative factors of road traffic crashes spatially varies with the geo-political locations. The paper recommended that more stringent measures be adopted by concerned authority, agency and stake holders in reversing the negative narrative associated with speed limit violation which was the leading cause of road crashes. Moreover, based on the fact that causative factors responsible for road traffic crashes varies with geo-political locations, there is need to look beyond just the causative factors and critically evaluate other variables that are peculiar to a particular geo-political location when it comes to road traffic crashes.

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Nature and Extent of Urban-Rural Interaction Between Minna and Selected Rural Settlement in Niger State, Nigeria

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Abstract

This study aims to investigate the increasing rate of interaction in terms of flow of people, goods and services between Minna, Garatu, Beji, Gwada and Tunga-mallam. The study assessed the nature and extent of interaction between Minna and the four rural settlements. A traffic survey of vehicles and volumes of passengers that moved between Minna and the four rural settlements on market and non-market days was carried out. Gravity model was used to calculate the relative strength of interaction of people between Minna and selected rural settlements. One hundred and fifty-six (156) respondents were sampled and administered a structured questionnaire. The result showed that there was a strong interaction between Minna and Garatu compared to other settlements (Beji, Gwada and Tunga-mallam) on market and non-market days. The data also showed that the rural settlements that specialized in providing low-order goods and services are significant market of agricultural products to neighbouring towns especially Minna and that the presence of a variety of agricultural products at cheaper prices in the rural markets encouraged urban-rural interaction. It was also confirmed that goods like agricultural products, clothes, petrol and other services like transport, labour, education were exchanged on the market and non-market days in the study area. Road accidents were the major problems that hindered the interaction. The research therefore recommends adequate support for urban agricultural production to minimize high cost of food in Minna and that road accidents cases should be properly checked to have smooth urban-rural interaction.

Keywords: *Urban-Rural, Gravity model, Traffic survey, Relative strength of interaction*

Background to the Study

Among other things, spatial interaction involves the movement of people between places, the flow of goods from one region to another, the diffusion of ideas from a Centre of knowledge to other areas, and the spread of a communicable disease from a group of people living in one area to those living in another (Haynes, and Fotheringham, 2020). Urban-rural interaction refers to linkages across space (such as flow of people, goods, money, information and wastes) and between sector (for example, between agriculture, services and manufacturing). In a broad term, spatial interaction also includes 'rural' activities taking place in urban centres (such as urban agriculture) and activities often classified as 'urban' (such as manufacturing and services taking place in rural settlements (<http://www.lied.org/Hs/themes/ru.html>. 2008).

In Nigeria, neither the resources nor the products of peoples' effort are uniformly distributed. For two or more regions to interact there must be a demand (or deficit) in one region and a supply (or surplus) in the other (Haynes, 2021). It is the complementarity of demand and supply (deficit and surplus) that brings about interaction (movement of flows). The major part of human development process is the exchange of goods and services in such a way that it complies with the principles of comparative advantage as well as flow of labour, goods and services from area of surplus to shortage or deficit. This is in addition to the aspect of comparative advantage which has to do with flow of products especially raw materials, food products and specialized services from where they have advantage or being produced to where such products are not available due to inhibition of physical factors such as climate, soil, among others. This flow promotes development and aid interaction between settlements. This activity is not uncommon in Niger state like other parts of the world. It is not uncommon to see the flow of people from Minna motor parks travelling to neighbouring rural settlements in the state while those in the rural areas also per take in daily trips to Minna, the capital of Niger state. The bases of these movements are often determined by economic, social and political forces.

In Niger state, research studies have shown various forms of interaction between Minna and other surrounding rural settlement. But, the interaction between Minna, Beji, Garatu, Gwada and Tungan-Mallam was obvious during reconnaissance visits that people were curious to know the quantum of the flow of people, reasons and problems of interaction on market and non-market days, types of goods and services exchange between them. Therefore, this curiosity has led to the conduct of this research to examine the extent of the interaction.

Literature Review

The ways in which space is organized and articulated through the circulation of people, goods and ideas between rural and urban areas is fundamental to an understanding of rural-urban relationship (Douglass, 2018). Rural – urban interaction is more than just flow of people, capital and goods but also include exchange of information and technology between rural and urban areas. Realization of the benefits of rural urban interaction rests not only on strengthening these interactions but also eliminating any variable that would mitigate their negative impacts. This chapter discussed the theoretical framework of the research and reviewed some recent works on urban-rural interaction. Such issues like concept of urban-

rural interaction, reasons for urban-rural interaction, rural-urban exchange and regional inequalities were reviewed. Discussion were also made on the inter-dependence between rural and urban settlements, market types, flow of goods, distance and spatial interaction as well as social and economic effects of urban-rural movement.

Theoretical Framework

Basically, there are three types of interaction models. These are the gravity models which measure interaction between all possible location pairs; the potential models which measure interaction between one location and every other location; and the retail model which measures boundary of the market areas between two locations competing over the same market. For the purpose of this study, the gravity model will be used because of its relevance. For decades, social scientists have been using a modified version of Isaac Newton's law of gravitation to predict movement of people, information and commodities between cities and continents (Haynes, 2021).

The gravity model (Reilly, 1978 cited in Joseph and Kuby 2011) seeks to predict the degree of interaction between two (2) places. The words “bodies” and “masses” used by Newton are replaced by “towns” and “population” respectively. The interaction model in Geography therefore, is based upon the idea that as the size of one or both of the towns increase, there will also be an increase in movement between them. The further apart the towns, the less will also be an increase in movement of people between them. This phenomenon is known as distance decay. The model is also used to estimate traffic flow of vehicles or passengers between settlements, migration between cities, and the number of people likely to use one central place, e.g. a shopping area, in preference to a rival central place. It can also be used to determine the sphere of influence of each central place by estimating where the breaking point between two settlements will be, i.e. the point at which customers find it preferable, because of distance, time and expenses considerations to travel to one Centre rather than the other (Fagnant, and Kockelman 2014).

The gravity model takes into account the population size of two places and their distance. Since larger places attract people, ideas and commodities more than smaller places and places closer together have a greater attraction. The relative strength of the bond between two places is determined by multiplying the population of city A by the population of city B and then dividing the product by the distance between the two cities squared.

The gravity model formula: $Gm = \frac{P_1 \times P_2}{d^2}$ Where P_1 = Population of settlement 1;

P_2 = Population of settlement 2; d_2 = distance between settlement

The gravity model is the most extensively used model for the study of spatial interaction and trip distribution modeling. Reilly stated that two cities (i and j) attract retail trade from any intermediate town or city in the vicinity of the breaking point, approximately in direct proportion to the population of the two cities and inversely proportional to the square of distance from these two settlements to the intermediate town. Reilly's breaking point formula

has been applied to area where retail trade is dominated by well-spaced central spaces and is used to determine whether a given settlement will look up to city A and B as the dominant central place based on the breaking point along a main route. Taylor, et. al. (2006) made the first attempt to apply gravity model to transportation planning too the retail centers in direct proportion to the size of the centers and inversely as the squares of the driving time (distance) from the neighborhood to the retail Centre.

Recently, Matt (2017) used the gravity model to compare the relative strength of interaction between New York and the Los Angeles and between El-Paso (Texas) and Tucson (Arizona) using 1998 population census. The result shows that the bond between New York and Los Angeles is greater than that of El Paso and Tucson (Arizona), and, more people migrate between Los Angeles and New York City than between El Paso and Tucson. In Nigeria, Okoko (2012 and 2016) also used the gravity model in his studies of spatial interaction pattern in the transport system in Akure which resulted that there is always high traffics analysis and design. The analysis shows that private cars, commercial cars, and mini-buses ply highways than big buses and Lorries.

One major criticism if the gravity model is that it lacks a theoretical background in the urban literature. It is based conceptually on Newton's law of universal gravitation and as Schneider (1959:128) observed, "there is no real relationship between a gravitational field and a trip generating system". The absence of a theoretical base for the gravity model in behavioural science makes it only a descriptive device. It describes spatial interaction but does not explain it. In order words, it looks not at what is happening, but at the result of what has happened (Lee, 1977 in Okoko, 2006). However, gravity model is used in this study as a theoretical frame because of its suitability as it predicts the strength of interaction in terms of flow of people between settlements that are relatively closer and interact more with each other.

Research Methodology

The Study Area

Historical Background of Niger State

Niger state was created out of defunct north western state in February, 1976. The state lies between latitudes 8°20' and 11°30'N and longitude 3°30' and 7° 30'E, and covers a land area of about 86,000km² (or about 8.6million bectares) representing about 9.3% of the total land area of Nigeria (Figure 3.1). it is located in the North Central Geo-political zone where it shares borders with the Republic of Benin (west), Zamfara (North), Kebbi (North-East), Kogi (South), Kwara (South-West), Kaduna (North-East) and FCT (South-East). The state has 25 local government areas with Minna as state capital (NSG, 2017).

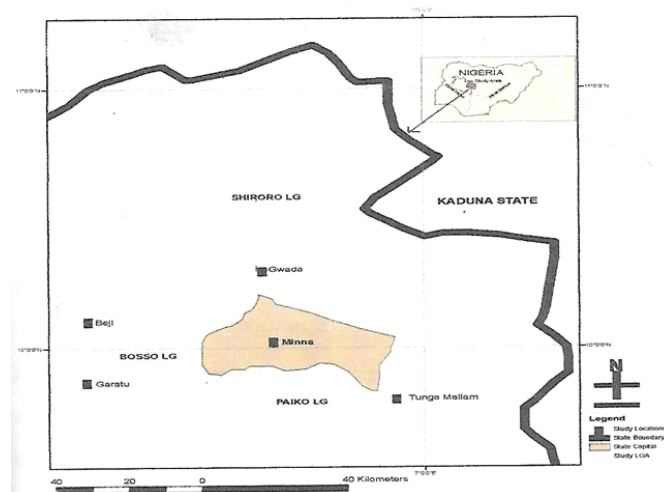


Fig. 1: Nigeria showing Niger State and the study area
Source: Fieldwork, 2021

Research Data and Method of Analysis

The data used for this study were acquired from one extensive field work. The data were obtained from traffic survey carried out at the four (4) motor parks of Garatu, Beji, Gwada and Tungan Mallam to determine the volume of passengers that move to and from the rural settlements on market and non-market days. The market days of Garatu is on Thursdays, Beji is on Wednesday, while Gwada is Fridays and Tunga Mallam is on Tuesdays. The survey was carried out simultaneously from the four (4) motor parks of the selected settlements with the help of research assistants to save time. The in and out flow data were collected by modes within a duration of sixteen (16) market and non-market days. The data were analyzed using frequency tables and line graphs. Structured interview schedule was used to elicit information from the respondents on the following parameter; the socio-economic background, type of goods and services exchange, reasons and problems of urban-rural interaction. Gravity model application was also used in the study as it seeks to predict the quantum or degree of interaction between two or more places. The secondary sources were obtained from books, journals, magazines, internets, maps, etc.

Two sets of data collected from the field were analyzed and discussed in this chapter. First, the traffic survey of the number of vehicles and the passengers that moved to and from the selected rural settlements on market and non-market days. Second, the questionnaires administered on the 156 respondents. Variable that was analyzed and discussed from the questionnaires included; the demographic characteristics of the respondents' differences in the type of goods and services exchanged on market and non-market days, reasons and problems of urban-rural interaction between Minna and selected rural settlements. The data utilized in this research were obtained from a sample of 156 respondents drawn from four purposively selected settlements around Minna.

Results and Discussions

The Strength of Interaction between Minna, Beji, Garatu, Gwada and Tungan-Mallam on Market Days

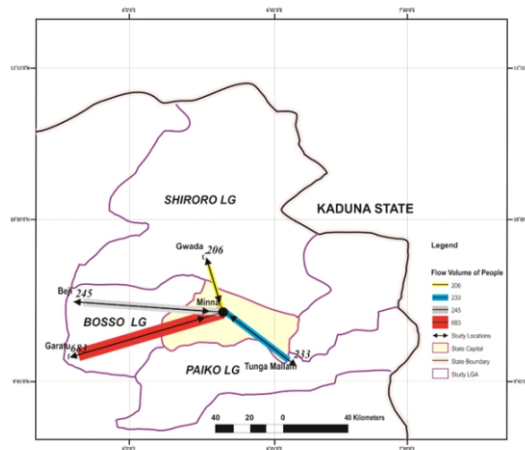


Fig.2: Flow map showing strength of interaction between Minna the four rural settlements studied on market days.

Sources: Fieldwork, 2021

Figure 2 shows the relative strength of interaction in terms of flow of people between Minna and selected rural settlements on market days using gravity model. In the flow map, the strength of interaction is expressed by the value and width of the arrow that connects the settlements. Therefore, Minna to Garatu which has the highest value and wider arrow indicates higher relative strength of interaction, which Minna to Gwada indicates low relative strength of interaction. Minna to Beji and Tungan-Mallam have the same strength of interaction. At a glance, it is deducible that Minna to Garatu have the highest relative strength of interaction of people due to distance effect and the fact that Minna has high economic activities. There is always a greater human interaction over short distance than long distances. Gettis (2003) said that, distance has a retarding effect on human interaction, because there are increasing penalties in time and cost associated with longer distances, more expensive interchanges. Therefore, the principle of distance decay, coupled with good transport network and booming economic activities linking Minna and Garatu, calls for the high flow movement. Minna to Gwada which indicates lower relative strength of interaction was also due to distance. Gwada is a bit far from Minna, cost and longer-distance affected the flow of people.

The Strength of Interaction between Minna, Beji, Garatu, Gwada and Tungan-Mallam on Non-Market Days

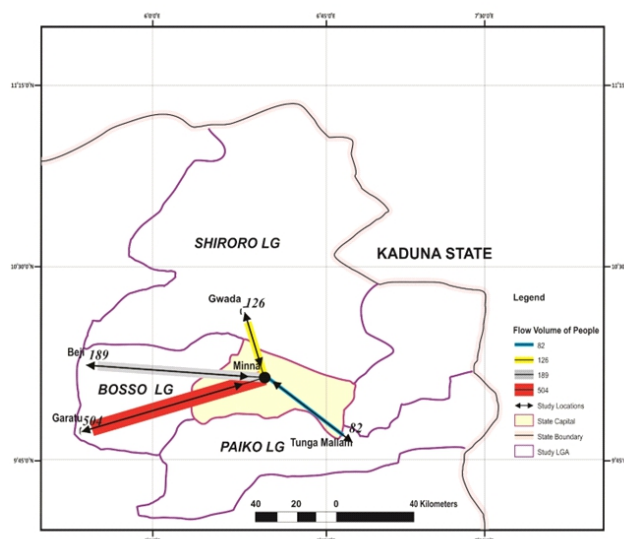


Fig.3: Flow map showing strength of interaction between Minna and the four rural settlements studied on non-market days

Source: Fieldwork, 2021

Figure 3 shows the relative strength of interaction in terms of flow of people between Minna and selected rural settlements on non-market days. The distance between Minna and Garatu still has the highest value and wider arrow which signifies highest strength of interaction on non-market days. This was because of its proximity to Minna and daily increase in economic activities that attracted the movement. Minna to Beji followed with relative strength of interaction on non-market days due to availability of daily yam market (Kasuwa-doya) at Beji which attracted more people. However, the distance between Minna and Tungan-Mallam has the lowest strength of interaction on non-market days due to lack of economic activities in the settlement.

Table 1: Goods Exchanged on Market Days

Types of Goods	Frequency	Percent
Agricultural Products	76	48.7
Building Materials	28	17.9
Petrol	9	5.8
Clothes	31	19.9
Others	12	7.7
Total	156	100.0

Sources: Fieldwork, 2021

Some 49% of the sampled respondents said agricultural products are the major goods exchanged on the market days (Table 1). In the study area, agriculture was an important economic activity; it absorbed a large number of people and many other economic activities revolved around it. This agreed with Falola et al. (2017) who asserted that agriculture made it possible to create, accumulate and appropriate wealth in forms of foodstuffs and cash crops. In rural communities, the market place is the major institution for local economic activities and exchange, which Ukwu (1983), pointed out that the market could be the focus of intense interaction and the principal point through which the rural communities is integrated in the national economy. Thus, the movement of farm products from distant farms to the local market places is an important part of agricultural production activity. Therefore, the rural market places serve as a Centre where varieties of farm products at cheaper rate are marketed. This and ever-increasing cost of foodstuffs in Minna led to the high patronage of rural markets for the purchase of the agricultural productions.

Table 2: Goods Exchanged on Non-Market Days

Types of Goods	Frequency	Percent
Agricultural Products	26	16.7
Building Materials	43	27.6
Petrol	47	30.1
Clothes	32	20.5
Others	8	5.1
Total	156	100.0

Sources: Fieldwork, 2021

Petroleum products are important in any form of transaction involving movement of people, goods and services, between places. In line with this, Table 4 shows that 30% of the sampled respondents said petroleum products are the major goods exchanged on non-market days between Minna and these rural settlements. This was due to the high rate of fuel scarcity experienced as at the time this research was carried out. Most of the vehicles carried Jerri cans containing petroleum products bought from Minna on non-market days to be sold on their market days due to the expected higher demands of petrol by the drivers. On the other hand, no matter the intensity of the fuel scarcity in Minna, these rural settlements do have petrol either in the officially approved filling stations or in the black markets. This agreed with Chinado (2019) that Paiko unlike other Nigeria rural hinterlands that specialize in providing lower order goods, serve as a significant market of petroleum products to the neighbouring towns specifically Minna no matter the scarcity. Some 28% of the respondents also said building materials were also exchanged on non-market days as shelter is very important in every settlement without which people may find it difficult to live in their homes. This was because Minna as an urban Centre have large markets where varieties of building materials are sold at cheaper prices. This attracted rural dwellers to Minna in non-market days to purchase such materials immediately after their products are sold off in their rural markets.

Table 3 Services on Market Days

Services	Frequency	Percent
Transport	57	36.6
Labour	39	25.0
Educational	32	20.5
Health	21	13.5
Communication	6	3.8
Others	1	0.6
Total	156	100.0

Sources: Fieldwork, 2021

Transportation is a factor in transaction relations. It links systems in different modes. It is an agent of communication, dissemination of social activities, extension of kinship ties, exchange mechanism, etc. Without which movement of people, goods and services cannot take place. In view of this, as many as 38% of the sampled respondents said that transport is the most common services observed on market days in the study area (Table 3). Transportation is very important for the movement of people, goods and services to and from the rural market. This conforms with Garba (2018) who said, transportation is the key influence without which no contact in space and time at desire will be possible. Road transportation network used in the study area was the commercial and public transport provided by Niger State Transport Authority (N.S.T.A). It was also physically observed that there is denser flow of vehicles on market days than other days of the week. Some 25% of the respondents said services like labour (middlemen, touts, truck pushers) were also observed on market days. This was because market activities cannot be carried out without the services of the above mentioned labourers. These people are responsible for the carrying of goods from one place to another and ensuring effective transaction in the market places.

Table 4 Services on Non-Markets Days

Services	Frequency	Percent
Transport	29	18.6
Labour	26	16.7
Educational	34	21.8
Health	38	24.4
Communication	15	9.6
Others	14	9.0
Total	156	100.0

Sources: Fieldwork, 2021

The existing health facilities in the selected rural settlements are inadequate, primary health centers do not have qualified medical personnel and better drugs, as a result do not attend to complex diseases or illnesses. In line with this, 24% of the respondents said they travel to Minna on non-market days to visit public, private hospitals or better primary health centres for the treatment of complex disease, immunization, vaccination, maternal care and first aid treatments. They normally travel on non-market days of the week in Minna public hospitals. It

has earlier been confirmed by NSMH, (2013) that residents in rural areas travel to Minna to obtain medical services because the existing primary health care centres do not attend to complex diseases. It was on rare that Minna residents travel to these rural settlements for traditional medicines.

Table 5: Analysis on reasons for patronizing markets in rural settlements

Reasons	Frequency	Percent
Demand for greater variety of goods	58	37.2
Cheaper goods on market days	47	30.1
Good road network	22	14.0
Easier access to banking facilities	24	15.4
Easier access to better healthcare	5	3.2
Total	156	100.0

Source: Fieldwork, 2021

Reasons for Patronizing Markets in Rural Settlements

The results of data analysis of the reasons adduced by respondents for patronizing markets in rural settlements were reported in Table 5. The dominant reason advanced was the demand for variety of goods available on market days where 37.2% of all respondents reported, while easier access to healthcare was the least frequently preferred reason (3.2%). Demand and supply are the determining factor because farming activities were the major occupation of the rural dwellers surrounding Minna coupled with the abundant farmland, different types of agricultural products were produced, such as yam, beans, guinea corn, maize, etc. especially on market days at a very subsidized rate. So, demand for such agricultural products has led to high patronage from Minna to these rural markets, while on the other hand, farmers also prefer to supply their products to Minna where demand for a particular product is high with maximum profit. However, cheaper means of transportation and good transport network that link Minna with these rural settlements also attract the farmers to carry their products to Minna. This phenomenon has led to high urban-rural interaction in the study area.

Discussion of Results

Traffic Survey of Movements on Markets and Non-market days

From the results of data analysis, the interaction is shown in the flow of people as well as different types of goods and services exchanged on market days between Minna and the selected rural settlements. The passengers comprise are such that more cars and mini buses ply most of the routes between Minna and these rural settlements compared to other means of transportation. This was because cars and mini buses are faster, as such passengers always preferred to travel by them. It was observed that the distance from Minna to Garatu has the highest relative strength of interactions on terms of flow of people compare to their settlements. This was because of their proximity and ever increasing economic activities that exist between them.

It was also observed that the movement of people normally reaches a peak in the morning and evening hours of the market days. This finding conforms with Junaidu (2004:78) who

observed that “it is common to see a heavy traffic into Abuja (the FCT) in the early hours of the day (between 5.00-11.00am) and a reversed flow in the evening hours (between 3.00pm-9.00pm) when people en-masse move out of the city to different satellite settlements”. Moreover, based on the result of the findings, it is obvious that there is a significant difference in the number of people that travel on market days compared to non-market days.

Reasons for Patronizing Markets in Rural Settlements

From the findings of the study, about 37.2% of the respondents patronized markets in the rural areas because of the availability of greater variety of goods, 30% due to availability of cheaper goods on the market as observed by the respondents. As such, more people patronized these rural settlements markets for the demand of variety of goods and cheaper rate of goods are compared to Minna patronage which is urban Centre. This goes contrary to Meagher and Mustapha (2019) that in northern Nigeria. The high cost of food peripheral villages which shows a strong involvement in the urban food market, a high proportion of non-farm employment, a substantial increase in agricultural wages, labour force and burgeoning land market. Demand and supply are the major determining factors that make people to interact between urban and rural settlements. The demand for variety of agricultural products at cheaper rate by Minna residents has led to the high urban-rural interaction between Minna and the four selected settlements. On the other hand, farmers prefer to supply their farm products to Minna where the demand for them is very high so as to maximize profit.

Conclusion and Recommendations

From the data analysis and discussion on the nature and extent of interaction of the study area, variables such as marital status, gender, age, occupation and educational status greatly influence the condition under which people interact. Based on the summary of the findings, the following conclusions are made. Thus; Since farming and trading are the pre-occupations of the majority of the people in the study area, the research work concluded that there are abundant varieties of agricultural products sold at cheaper prices in the rural markets. As such, these places will continue to attract people from Minna and henceforth urban-rural interaction continues. Since the higher relative strength of interaction is between Minna and Garatu because of their proximity and high economic activities, the research concludes that people patronize shorter distant areas with high economic activities than longer distant areas. It can therefore be concluded that there are more people that ply the route linking Minna and these rural settlements for various activities (social and economic) on market days than other days of the week which signifies high interaction on market days than on non-market days in the study area.

Based on the conclusion of the research findings, the following recommendations are made:

1. Government should take advantages of the diverse agricultural resources in settlements around Minna town to guarantee food security, reduce rural poverty and accelerate economic development of these rural areas and the state.
2. In view of the high density of traffic flow especially on market days, public enlightenment campaign and adequate supervision of vehicles by men of the Federal Road Safety Commission (FRSC) should be intensified to reduce reported cases of

- road accidents so as to ensure safe and free flow of vehicles between rural and urban areas.
3. As at the time research was conducted, high rate of fuel (petrol) scarcity was experienced. Proper monitoring of fuel prices and government built filling stations should be pursued in rural settlements around Minna so as to avoid the risk of travelling with petroleum products in the commercial vehicles.
 4. Urban or peri-urban agricultural should be encouraged by the government so as to reduce the problems of high cost of food items in the urban centres like Minna. This will no doubt create income earning activities for the low and medium income earners.
 5. The volume of traffic is very between Minna and surrounding settlement, the state government should therefore provide traffic regulations so as to check out the traffic congestion especially on market days.

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Gender Involvement of Tuber Crops Farmers in Ogba/Egbema/Ndoni Local Government Area (Onelga) of Rivers State

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Abstract

The study investigated gender involvement of tuber crops farmers in Ogba/Egbema/Ndoni Local Government Area (ONELGA) of Rivers State. It seeks to identify types of tuber crops that are presently grown in the area; examine the gender differentials in the production of tuber crops and ascertain the reasons for gender differentials in tuber crops production in the area. Two hypotheses were devised to further direct the study. Descriptive survey design was employed and a total sample of 120 farmers made up of equal number of male and female from 12 communities were randomly selected for the study. The major analytical tools engaged were bar graph and weighted mean score derived from Likert rating scale, while Z-test was the inferential tool used to test the hypotheses at 0.05% significant level. The study identified in ranking order that cassava ($M=3.65$)^{R5}, sweet potato ($M=2.75$)^{R4}, yam ($M=2.50$)^{R3} and cocoyam ($M=2.35$)^{R2} are the dominant tuber crops grown in subsistence scales in ONELGA. It showed a mean difference of -1.99, -1.05, -1.03 for cassava, sweet potato and cocoyam respectively, in favour of women, while it showed a mean difference of 1.77 for yam production in favour of men. Finally, it shows in decreasing order of strength that the reasons for gender differentials in tuber crops productions in the area include that: the said – rich syndrome in the society has made most able bodied male farmers to abandon agriculture ($GM = 4.58$); yam production is strenuous, so female farmers prefer to grow cassava and cocoyam that are less strenuous ($GM = 4.53$); theft of tuber crops' products especially, yams from the farm by thieves discourages both men and women from tuber crop production ($GM = 4.48$); tuber crop farming is viewed as farming for lazy and poor people ($GM = 4.15$); and the capital intensive nature of yam production influences female involvement ($GM = 3.76$) among other variables. Test of significance indicates no significant difference in the views of both men and women as regards tuber crops production in the area. So, the study recommended that: A massive call to return to agriculture should be enforced to encourage tuber crops production in ONELGA; incentives should be given publicly to performing tuber crop farmers of the year in the area; and community policing should be engaged to discourage theft of tuber crops products from the farmers' farms.

Keywords: *Gender, Involvement, Tuber Crops, Farmers, Production*

Background to the Study

Tubers are various types of modified plants structures that are engorged to amass nutrients (Asumugha, Njoku, Okoye, Aniedu, Ogbonnaya and Nwosu, 2009). They are used by plants to endure the winter or dry months to supply energy and nutrients for re-growth during the next growing season, and as a means of asexual reproduction. The main root/tuber crops commonly grown in Nigeria are cassava (*Manihot esculenta*), the yam (*Dioscorea spp.*), the potato (*Solanum spp.*), the sweet potato (*Ipomoea batatas*) and the edible aroids (*Colocasia spp.* and *Xanthosoma sagittifolium*).

According to Asumugha et al (2009) tuber crops are second in value to cereals which are global sources of carbohydrates. Odinwa et al (2011) stated that sweet potato, cassava and yam hold high fiber content, complex carbohydrates, protein, vitamins and minerals. They also offer some minerals and essential vitamins especially during processing. In some part of Nigeria, their diet is supplemented with the tender leaves of sweet potato, cassava and cocoyam which are rich sources of protein, minerals and vitamins (Asumugha et al, 2009).

Agriculture is the stronghold of most African economies and occupies a vital position in the development of the continent. Despite the importance of agriculture, improvements in this sector have been patchy and on the whole disappointing, with a current development growth rate of 1.7% (Nweke 2016). This slow rate of development has been compounded in the recent past by persistent crop failures, a high human population, economic slump, and swelling external debts. These factors coupled with agricultural mismanagement, escalating cost of production and difficulties with the structural adjustment programmes of the World Bank and the International Monetary Fund (IMF) have led to food scarcity and insecurity (Nweke et al, 1999). All these imply an urgent need to address the issues retarding agricultural production (mostly tuber crops) in Africa and more especially, in Ogba/Egbema/Ndoni local government area (ONELGA) of Rivers State. This requires an understanding of how the farming systems work in practice. To understand the farming system, it is important to recognize the various roles of men and women, including youth, and children in tuber crop production.

In most African countries, women participate in all agricultural subsections besides raising of children. The World Bank (2003) report indicates that women provide 60-80 percent of agricultural labour and they participate in all aspects of agriculture. However, the participation of women in agriculture in developing countries is hardly documented and acknowledged. Commenting on women and rural development in Nigeria, Ezumah (2000) is of the view that women in rural areas are involved in several productive activities, yet their roles are never reflected in the mainstream of public development agenda, which is quite unfair.

Gender has proven to be an essential variable for analyzing the roles, responsibilities, constraints, opportunities, incentives and costs and benefits in Agriculture. Innumerable development projects, government programmes, research studies and theoretical models have demonstrated that improvement of women's access to agricultural research and extension

services must begin with an analysis of men's and women's participation in the agricultural production process along two related dimensions: their role in agriculture and their role in the household (Chukuigwe, 2013).

Women are not only key agents for delivery of poverty reduction programmes but, also found themselves in the forefront of major global issues - food production, population growth and climate change. In many African countries, including Nigeria there is still a lack of appreciation of women's rights and gender parity. Consequently, women and girls face discrimination in areas ranging from ownership of assets to accessing social and economic services. This discrimination, coupled with the influence of traditional practices is a significant barrier in the search for women's empowerment (Amugo and Odinwa, 2022). The empowerment of women' is an unconditional necessity for countries that are prepared to face the challenges of globalization as reflected in the global amalgamation of trade, finance, investment and use of new technology.

It is now extensively established that rural women as well as men, throughout the world are engaged in a range of productive activities essential to household welfare, agricultural productivity and economic growth. Yet women's substantial contribution continues to be methodically marginalized and undervalued in conventional agricultural and economic analysis and policies while men's contribution remains the central, often the sole focus of attention. Women are typically and wrongly still characterized as “economically inactive” in statistical surveys of agriculture, a result that tells us more about survey methodology than about reality (Amugo and Odinwa, 2022). Agricultural extension services still do not attach much importance to reaching women farmers or women in the farm. Policy makers and administrators characteristically still assume (in the face of the empirical data) that men are the farmers and women play only “supportive role” as farmers' wives (Chukuigwe, 2013).

The official definition of a farmer in Nigeria in 1965, for example, was given as “an adult male who has the right to produce in a farm. Women are not classified as farmers among many studies of rural women in Nigeria (WORDOC, 1988). According to Akor (1990) 92% of the surveyed northern rural women gave farming as their primary or secondary occupation. Out of these, 74 percent do not own or work their own separate plots. While the official definition of a farmer in Nigeria has been corrected to be gender neutral as in most other countries, gender bias is prevalent in official agricultural circles and among field professionals.

Three quarters of all poor people in developing countries live in rural areas. Their livelihoods usually depend either directly or indirectly on agriculture, with women as the main producers of food on farms. In Sub-Saharan Africa for instance, they produce up to 80% of all staple foods, both those for use in the home and for sale in the market (World Bank, 2013a). In the gendered division of labour women perform a variety of tasks, including general agricultural work and raising fowls and goats, as well as maintaining the household and family. Their responsibilities range from seed management to planting to processing and marketing of agricultural products.

In many developing counties like Nigeria, women have little or no access to or control over land, financial Services, productive resources and extension or marketing services. This is usually due to cultural, traditional and legal factors (including customary law). Moreover, women are often underrepresented in rural organizations and institutions, have low levels of education and are poorly informed. This prevents them from having an equal say in decision-making processes to influence policy and strategy at municipal level (World Bank, 2013b).

Over the years, there has been a noticeable increase in the level of awareness in the modern crop farming activities in Ogba/Egbema Ndoni Local Government Area of Rivers State through Green River Project (GRP) of the Nigerian Agip Oil Company Limited and Sustainable Community Development Programme (Seed Multiplication Centre) of Total E&P Limited (Odinwa, Emah and Odinwa, 2016). Yet, there is disparity in the number of farmers who are involved in growing of tuber crops in the area.

From time immemorial, growing of tuber crops has been linked to a belief system that men grow yam while cassava, potato and cocoyam are crops meant for women. But with the awareness of science and technology as well as the availability of improved crops varieties of tuber crops, the trend is supposed to have changed and more and better food produced through mass participation of men and women in the area. Of particular importance to note, is that since the advent of oil boom, which relegated agriculture to the background of nothingness, majority of men and women in ONELGA have left farming and farming activities because of the crazy rush for quick money. This has consequently left agriculture and particularly growing of tuber crops which constitute the major staple food in the area in the hands of significant few that has lead to the momentous scarcity of tuber crops products and the attendant high cost of available ones in the area. The questions bothering the researchers are these: What types of tuber crops are currently grown in the area? What are the gender differentials in the production of tuber crops in the area? What are the reasons for gender differentials in tuber crops production in the area? Gender equality is a human right issue and thus has a value in itself. Therefore, this study was undertaken to provide answers to the foregoing salient questions which invariably formed the specific objectives of this study.

Two hypotheses were devised to direct the study, such as:

1. Ho: There is no significant difference in the gender differentials of tuber crops farmers in ONELGA.
2. Ho: The reasons for gender differentials in tuber crops productions do not differ significantly between the male and female farmers in ONELGA.

Methodology

The study was conducted in Ogba/Egbema/Ndoni local government area which is one of the twenty-three and one of the largest Local Government Areas in Rivers State. The headquarters is at Omoku mainland. It is the second leading industrial and commercial town in the State (Odinwa and Nlerum, 2015). From the same source, ONELGA has three major ethnic groups namely, Ogba, Egbema and Ndoni. They speak divergent but familiar languages with unique and peculiar cultures. The presence of good climate, vast arable land

and vegetation, fertile soil, hospitality and peaceful disposition made the inhabitants to be predominantly farmers and fishermen. They farm mainly cassava, yam, cocoyam, vegetables, plantain, etc., which still represent the most important and often key components of traditional diets in the area. A few of the population are traders to balance her economy (Odinwa and Nlerum, 2015). The area is blessed with abundant natural resources together with human and deposits of oil and gas.

Descriptive survey design was used to reach the farmers and a total sample size of one hundred and twenty (120) farmers made up of equal number of male and female was randomly selected from twelve communities in the study area. Primary data used in this study were obtained from personal interview and structured questionnaire designed in a Likert rating scale. The major analytical tools employed in the study were bar graph and weighted mean score derived from Likert rating scale $(5+4+3+2+1)/5$, which was processed to obtain a decision mean of 3.0 and used for rational judgment, while Z-test was the inferential tool used to test the hypotheses at 0.05% significant level. Results were illustrated in Bar Graph and Tables for clarity sake.

Result and Discussion

Types of Tuber Crops Grown in Ogba/Egbema/Ndoni LGA

The result as shown in Figure 1 identified cassava ($M=3.65$), which ranked 5 as the major and highest grown tuber crop in ONELGA, followed by sweet potato ($M=2.75$), yam ($M=2.50$) and cocoyam ($M=2.35$), which ranked 4, 3 and 2 respectively as other tuber crops that are grown in subsistence scales in the area. This finding shows that cassava is the major tuber crop grown in commercial quantity in the area, while yam, sweet potato and cocoyam productions are included farm activities by farmers just to make ends meet rather than growing them as a business to make money. This finding may be attributed to the oil and gas businesses in the area for over 50 years that have diverted the minds of able bodied men and women from core agricultural activities in a bid to share in the quicker way of making money in the area. This is supported by Onuha (2007) who affirmed that the increasing dependence in oil and gas is posing difficulty in developing agriculture in Nigeria.

The result also showed that carrot is not yet grown in ONELGA. This may stem from the fact that carrot is a temperate crop and soil specific, hence cannot perform in tropical rainforest soils in ONELGA, or because the required extension attention has not been given to the production of carrot in the area, hence the absolute dependence on northern Nigeria for the supply of carrot in the area.

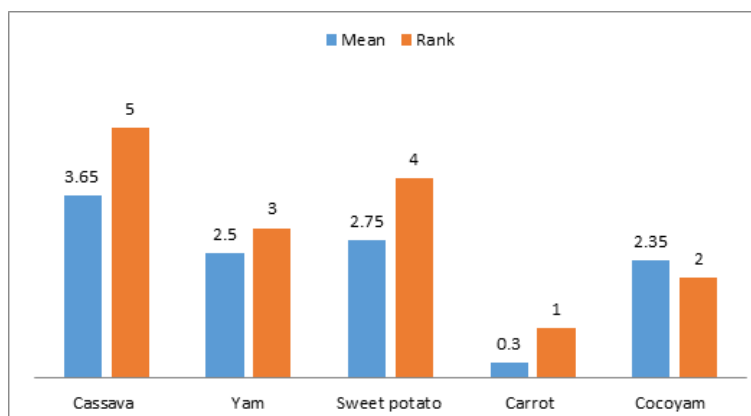


Figure 1: Bar Graph showing the Mean Distribution and Ranks for Types of Tuber Crops Grown in ONELGA

Source: Field survey, 2022

Gender Differentials in Tuber Crops Production in ONELGA

The result in Table 1 indicated that cassava (GM = 3.80) dominated other tuber crops produced in the area. It showed a mean difference of -1.99, -1.05, -1.03 for cassava, sweet potato and cocoyam respectively, implying that women are domineering in cassava, sweet potato and cocoyam productions than their men counterpart in ONELGA. While it showed a mean difference of 1.77 and 0.26 for yam and carrot cultivation in favour of men, meaning that men are little more involved in yam and carrot farming than the women in ONELGA. Although, there was neither gender nor cultural barrier that is restricting both men or women from cultivating any of the tuber crops of their choice in the area, meaning, that cultivation of tuber crops is gender neutral in ONELGA. This finding gained the support of Akor (1990) who acknowledged that the certified definition of a farmer in Nigeria has been corrected to be gender neutral as in most other countries, and that what determines the choice of any farming enterprises is the socio economic interest of the farmer.

Table 1: Gender Differentials in Tuber Crops Production in ONELGA

TUBER CROPS	MEN N = 60		FEMALE N = 60		GRAND N = 120		MEAN DIFF. M - F
	SCORE	MEAN	SCORE	MEAN	SCORE	MEAN	
CASSAVA	169	2.82	287	4.81	456	3.80	-1.99
YAM	176	2.93	106	1.76	282	2.35	1.17
SWEET POTATO	143	2.39	206	3.44	349	2.91	-1.05
CARROT	23	0.39	08	0.13	31	0.26	0.26
COCOYAM	127	2.11	188	3.14	315	2.63	-1.03
CUMULATIVE MEAN		2.60		2.65		2.39	-0.05

Decision Mean = 3.00

Source: Field Survey, 2014

Z-test result (Table 2) showed a (Z-cal = -1.15) and a (Z-tabulated = 1.86) at P > 0.05%; this lead to the acceptance of the null hypothesis which states that "There is no significant

difference in the gender differentials of tuber crops farmers in ONELGA'. This means that the attitude of both men and women as regards tuber crops production in the area are the same that women dominate in cassava, sweet potato and cocoyam production while men dominate in yam production.

Table 2: Z-test Result on Gender Differentials in Tuber Crops Production in ONELGA

Source	N	Mean	df	Variance/Sd	z-cal	z- tab	Remark
Male	60	2.13	118	1.05/1.03			
Female	60	2.66		3.17/1.78			
Total	120				-1.15	1.86	NS

S - Significant at $P > 0.05\%$

Source: Field Survey, 2018

Reason for Gender Differentials in Tuber Crops Production in ONELGA

The result (Table 3) shows in decreasing order of strength that the reasons for gender differentials in tuber crops productions in the area include that: The said – rich syndrome in the society has made most able bodied male farmers in the area to abandon agriculture (GM = 4.58); Yam production is seen as strenuous, so female farmers in the area prefer to grow cassava and cocoyam that are less strenuous (GM = 4.53), Theft of tuber crops' produce especially, yams from the farm by thieves discourages both men and women from tuber crop production (GM = 4.48), Tuber crop farming is viewed as farming for lazy and poor people in the area (GM = 4.15); The capital intensive nature of yam production influences female involvement in the area (GM = 3.76); Profit from tuber crops enterprise does not encourage male farmers in their production (GM = 3.73), Yam is more soil specific and such soil (land) is not given to women in the area (GM = 3.48); and Oil exploration in the area has made most of the male tuber crop farmers to abandon farming activities to female farmers (GM = 3.38) among other reasons. These findings are critical and supports the observations of Manyong *et al* (2001), Nweke *et al* (1991), Timothy and Bassey (2009) that insufficiency and high cost of staking materials, which are time consuming and labour intensive reduce the profit margins of farmers engaged in yam production and finally declared that yam production is a non-profitable enterprise for men even though it has been considered mainly as man's crop.

However, the result recorded that: unavailability of agricultural land for the production of tuber crops like yam has made male farmers to go into other business in the area (GM = 2.85); no market for tuber crops in ONELGA (GM = 2.79); capital intensive nature of yam production does not influence male involvement in the area (GM = 2.55), Production process in tuber crops is tedious for men to do (GM = 2.18) and Custom of the people demands that yam production is for male farmers and other tuber crops for the females (GM = 2.06) were not reasons for gender differentials in tuber crops productions in ONELGA. This finding portrays that there are lands, appreciable demands for tuber crops products and absence of gender barrier for entry into tuber crops cultivation in the area. It then means that apart from few technical and environmental hitches, it is complete lose of interest in agriculture that is playing for not advancing in rigorous tuber crops production in ONELGA, but not gender conflict.

Table 3: Reason for Gender Differentials in Tuber Crops Production in ONELGA.

TUBER CROPS	MEN MEAN N = 60	FEMALE MEAN N = 60	GRAND MEAN N = 120	REMARK
CUSTOM OF THE PEOPLE DEMANDS THAT YAM PRODUCTION IS FOR MALE FARMERS AND OTHER TUBER CROPS FOR FEMALE.	1.90	2.21	2.06	REJECTED
UNAVAILABILITY OF AGRICULTURAL LAND FOR THE PRODUCTION OF TUBER CROPS LIKE YAM HAS MADE MALE FARMERS TO GO INTO OTHER BUSINESS IN THE AREA.	2.75	2.95	2.85	REJECTED
THE SAID – RICH SYNDROME IN THE SOCIETY HAS MADE MOST ABLE – BODIED MALE FARMERS IN THE AREA TO ABANDON AGRICULTURE	4.53	4.63	4.58	ACCEPTED
OIL EXPLORATION IN THE AREA HAS MADE MOST OF THE MALE TUBER CROP FARMERS TO ABANDON FARMING ACTIVITIES TO FEMALE FARMERS.	3.22	3.53	3.38	ACCEPTED
YAM PRODUCTION IS STRENUOUS, SO FEMALE FARMERS IN THE AREA PREFER TO GROW CASSAVA AND OTHER TUBER CROPS .	4.44	4.63	4.53	ACCEPTED
THE CAPITAL INTENSIVE NATURE OF YAM PRODUCTION INFLUENCES FEMALE INVOLVEMENT IN THE AREA .	3.50	4.01	3.76	ACCEPTED
THE CAPITAL INTENSIVE NATURE OF YAM PRODUCTION DOES NOT INFLUENCE MALE INVOLVEMENT IN THE AREA	2.37	2.73	2.55	REJECTED
TUBER CROP FARMING IS SEEN AS FARMING FOR LAZY AND POOR PEOPLE IN THE AREA.	4.30	4.00	4.15	ACCEPTED
LONG GESTATION PERIOD OF TUBER CROPS DISCOURAGE MEN FROM EMBARKING ON THEIR PRODUCTION.	3.40	3.44	3.42	ACCEPTED
THERE IS NO MARKET FOR TUBER CROPS IN ONELGA.	2.78	2.80	2.79	REJECTED
PROFIT FROM TUBER CROPS DOES NOT ENCOURAGE MALE FARMERS IN THEIR PRODUCTION.	3.23	4.37	3.73	ACCEPTED
THEFT OF TUBER CROPS ESP. YAM FROM THE FARM BY THIEVES DISCOURAGES BOTH GROUPS FROM FARMING .	4.63	4.33	4.48	ACCEPTED
YAM IS MORE SOIL SPECIFIC AND SUCH LAND IS NOT GIVEN TO WOMEN	3.13	3.82	3.48	ACCEPTED

Decision Mean = 3.00**Source:** Field survey, 2014

Test of significance (Table 4) showed a (z-cal = -1.82) and a (z-tab = 1.64), leading to the acceptance of the null hypothesis which affirms that 'The reasons for gender differentials in tuber crops production do not differ significantly between the male and female farmers in ONELGA'. This implies that no significant difference exists between the views of men and women on the reasons for gender differentials in tuber crops productions in the area, meaning that both groups are on the same page in this subject.

Table 4: Z-test Result on Gender Differentials in Tuber Crops Production in ONELGA

Source	N	Mean	df	Variance/Sd	z-cal	z- tab	Remark
Male	60	3.28	118	0.89/0.95			
Female	60	3.58		0.64/0.80			
Total	120				-1.82	1.64	NS

S - Significant at $P > 0.05\%$

Source: Field Survey, 2018

Conclusion

The study showed in ranking order that cassava, sweet potato, yam and cocoyam are the dominant tuber crops grown in subsistence scales in ONELGA. It showed that women major more on cassava, sweet potato and cocoyam productions while men dominate in yam production. It also showed in decreasing order of potency that the reasons for gender differentials in tuber crops productions in the area were that: the said – rich syndrome in the society has made most able bodied male farmers in the area to abandon agriculture; yam production is strenuous, so female farmers in the area prefer to grow cassava and cocoyam that are less strenuous; theft of tuber crops' produce especially, yams from the farm by thieves discourages both men and women from tuber crop production; tuber crop farming is viewed as farming for lazy and poor people in the area; the capital intensive nature of yam production influences female involvement in the area; profit from tuber crops enterprise does not encourage male farmers in their production; yam is more soil specific and such soil (land) is not given to women in the area; and oil exploration in the area has made most of the male tuber crop farmers to abandon farming activities to female farmers among other reasons. Yet, there was no custom or law of the people that confined yam production to only male farmers and other tuber crops to the females, rather, it is complete lose of interest in agriculture that is playing for not advancing in tuber crops productions in Ogba/Egbema/Ndoni local government area of Rivers State.

Recommendations

Base on the findings of this study, the following recommendations were made:

1. A massive call to return to agriculture should be enforced to encourage tuber crops production in ONELGA.
2. Mono economic activity around oil and gas should be practically deemphasized by the three tiers of government.
3. Incentives should be given publicly to performing tuber crop farmers of the year in the area
4. Community policing should be engaged to discourage theft of tuber crops products especially yam from the farmers' farms.

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Assessment of Relationship Between Trend of Registered Vehicles and Road Traffic Volume in Calabar Metropolis, Nigeria

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Abstract

This study aims at assessing the relationship between trends of registered vehicles and road traffic volume in Calabar metropolis, Nigeria. The following objectives were set to guide the study viz: to analyze the trend of registered vehicles (2012 – 2018), to assess the traffic volume and to identify the relationship between registered vehicles and the volume of traffic within the study area. Secondary data were obtained from the Cross River Bureau of Statistics and Internal revenue service while primary data were obtained from direct traffic count along the major road within the study area. Descriptive and inferential statistical tools were used in analyzing the obtained data. The result of time series graph showed that there was an upward trend of registered vehicles with private vehicles leading with 65.5%. The one-week traffic count showed that Monday recorded the highest number of vehicles with 8424 vehicles while its lowest was on a Sunday with 6775 vehicles. The Pearson product moment correlation result showed that there was a strong and positive correlation between the trend of registered vehicle and the existing traffic volume within the study area. It was recommended that transportation infrastructure and other road furniture be expanded and regularly upgraded in order to match up with the increasing road traffic volume and upward trend of registered vehicles.

Keywords: *Trend, Traffic volume, Registered vehicles, Correlation and Time series*

Background to the Study

The growth of cities in the world is mostly accompanied with traffic congestion and this have over the years posed great challenge to transport and city planners. This is based on the difficulties they confronted in trying to bring the situation under control. Existence of traffic congestion is due to a situation where the volume of vehicular traffic is much greater than the available road capacity. Traffic congestion brings about artificial barriers which result in delays over time and space for commuters and goods. It is also accompanied with increase in air pollution. The negative impact associated with traffic congestions in most urban areas needs to be over emphasized.

Increase urbanization has also created changes in socio-economic status of most urban dwellers in their earnings thereby fueling the desire to acquire motor vehicles. In most parts of the world such as Nigeria, owning a personal vehicle is a sign of prestige due to the poor mass transport system and other alternative means of transportation. This has created the rising trend of private registration of vehicles which has continued to rise year after year. According to National Bureau of statistics/Federal Road Safety Corp (2017), it has been estimated that the population of vehicles in Nigeria is put at eleven million, four hundred and fifty-eight thousand, three hundred and seventy (11,458,370). This figure is believed to have doubled by now. A further breakdown of this statistics showed that commercial vehicles account for 58.8%, private vehicles 44.5%, government owned vehicles 1.17% while diplomatic vehicles accounted for 0.05% respectively. This revealed a high volume of privately owned vehicles seriously competing with commercially owned vehicles.

For a better solution to traffic congestion which have assumed a hydra-headed dimension, there is need to have an understanding of those variables which acts as influential factors that fueled traffic congestion. It should also be noted that one of the key variables that have a close relationship with traffic congestion is the trend of registered vehicles. This paper aim at identifying the level of relationship between trend of registered vehicles and the existing traffic volume. It is hoped that this will guide policy makers in transport management sector in controlling all these existing variables in order to bring a better control measure towards reducing the impact of traffic congestion which have become a menace in our cities.

Literature Review

Several studies have been conducted in relation to road traffic volume and congestion which are briefly explained below;

Tanzina and Nita (2020) in their surveyed of road traffic measures towards sustainable and resilient transportation system in some selected cities in U.S.A. The result showed a significant variation in traffic congestion among the observed cities while confirming a similar congestion threat in all the cities.

Popoola, Abiola and Adeniji (2013), investigated the causes, effects and remedies of traffic congestion along Mowe/Ibafo axis of Lagos – Ibadan express way using relative important index (RII) rating. The result ranked inadequate road capacity, poor pavement as well as poor traffic management as the top three causes of traffic congestion.

Also, a study conducted by Atomode, Odusolu and Isah (2019) aim at identifying the perception of transport stakeholders on spatio – temperal pattern of traffic congestion in Lokoja, Nigeria. Data for the study were obtained and analyzed using one way analysis of variance (ANOVA) for traffic variation. The result revealed that traffic peaked during the morning rush and in the evening.

Ukpatta and Etika (2012) in their investigation of traffic congestion in major cities in Nigeria based on questionnaire analysis, showed that major causes of traffic congestion in most urban cities were poor driving habits, poor road network, inadequate road capacity and lack of parking facilities. Similarly, Agbonika (2011) in his study sampled the population of commuters in Abuja metropolis, Nigeria. It was discovered that 18.3% of them lived within the city centre. This means that location of government offices and commercial offices without considering the spread of residential areas in master plan development can pose serious traffic challenges to and fro from major central business district (CBD) of the area.

In the same vein, Momoh (2011) stressed that inadequate transportation planning system in Nigeria has resulted in over dependence on motor vehicles as a major means of transportation. Aworemi, Adul-Azeez, Oyedokun and Adewoye (2009) in their study of traffic congestion in Lagos metropolis, revealed that the major causes of traffic congestion include poor road condition, inadequate road infrastructure, accidents, inadequate traffic planning, drivers' behavior, and lack of integrated transport system.

Despite all these studies, none has deem it fit to identify the degree relationship that exist between the trend of vehicle registration and traffic volume which are very important variables. Hence this paper is written in order to fill this yearning gap.

Aims and Objectives

The paper is generally aim at assessing the trend of registered vehicles and it relationship with road traffic volume in Calabar metropolis. In order to achieve this aim, the following objectives stated were in order to guide the study, viz:

1. To analyze the trend of registered vehicles in Calabar metropolis between 2012 to 2018
2. To evaluate the trend of registered vehicles between 2012 to 2018
3. To investigate the traffic volume within the study area
4. To identify the degree of relationship existing between registered vehicles and traffic volume within the study area

Materials and Methods

Map showing network of roads within the study area and Global Position System (GPS) were used in conducting the require reconnaissance survey of the study area. Primary data obtained was through a week traffic count. Secondary data obtained were from Cross Rivers State Bureau of statistics and Internal Revenue Service. Descriptive statistics such as time-series analysis graph, percentages were used while inferential statistics such as Pearson product moment correlation was used in analyzing some of the obtained data.

The Pearson product moment correlation (r) is given as $r = \frac{\frac{1}{n} \sum (x - \bar{x})(y - \bar{y})}{(\sigma_x)(\sigma_y)}$ (Udofia, 2005)

Where;

r= correlation coefficient,

x and y = variable of interest,

σ = standard deviation

Results and Discussions

Table 1: Registered vehicles between 2012-2018

Year	Private vehicles		Total	%	Commercial vehicles		Total	%	Grand Total
	Motor vehicle	Motorcycle			Motor vehicle	Motorcycle			
2012	85	14	99	5.8	34	0	34	2.0	133
2013	106	16	122	7.1	30	0	30	1.7	152
2014	120	21	141	8.1	57	0	57	3.3	198
2015	125	31	156	9.1	76	0	79	4.4	232
2016	135	39	174	10.1	116	0	116	6.7	290
2017	140	40	180	10.5	156	0	156	9.1	336
2018	155	47	101	11.7	177	0	177	10.3	379
Total	866	208	1,074	62.4	646	0	640	37.5	1,720

Source: Cross River State Bureau of statistics/Internal Revenue Service (2018) and authors analysis

The above table showed the number of private and commercial vehicles that have been registered for both motorcycles and motor vehicles. The result also revealed that between the period of 2012-2018, privately owned vehicles registered was leading with 62.4 percent while that of the commercial registered vehicles were 37.5%. this therefore showed that more private vehicles are being registered which is a pointer to high level of neglect and inefficient commercial vehicles. This means that if the trends continue more vehicles will be seen on the road with the tendency of fueling road traffic volume. Furthermore, commercially registered motorcycle was nil. This was due to official ban placed on commercial motorcycle within the major roads in the metropolis.

Table 2: Trend of registered vehicles between 2012-2018

Year	(A) Newly registered vehicles	(B) Three years moving total	(C) three years moving average
2012	133	0	0
2013	152	483	161
2014	198	582	194
2015	232	720	240
2016	290	858	286
2017	336	1,005	335
2018	379		0

Source: Authors computational analysis

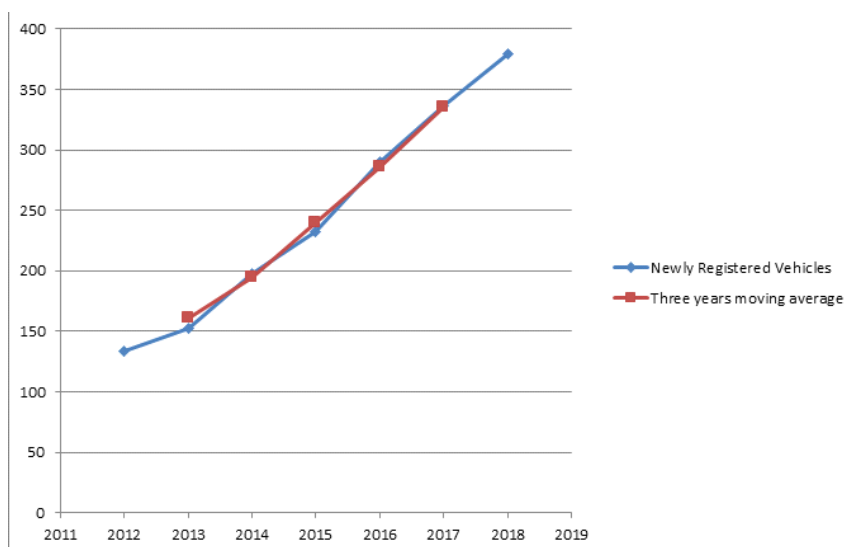


Fig 1: Time series graph showing trend of registered vehicles

The graph above showed a rising trend of registered of registered vehicles which goes upward with the three years moving average.

Table 3: Summary of product moment correlation

Categories	Number	(X) commercial	(Y) private	$(x - \bar{x})(y - \bar{y})$	$(x - \bar{x})$	$(y - \bar{y})$	R	t cal. table	T table value
Registered vehicles	7	646 $\bar{x} = 34.3$	$\sum = 1,074$ $\bar{y} = 153.0$	$\sum = 12,540.9$	$\sum = 7,601$	44,121.88	0.68	4.9	@0.05 = 2.45

The result of the above Pearson Product moment correlation showed that there is a strong relationship between ownership of private vehicles and commercial vehicles with coefficient of 0.68. This means that increase in any of these variables has the capacity of influencing the other by 68.00%. This should call for the introduction of paid parking and other levies as a means of discouragement for private vehicle owners in bringing their vehicles to most of the Central Business District (CBD). This will act as a means of reducing the number of vehicles within the metropolis, thereby reducing traffic congestion.

Table 4: One week traffic count

S/N	Time Interval	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Hourly Total
1	7 – 8 am	771	508	572	541	672	533	531	4,128
2	8 – 9 am	866	658	568	610	563	600	560	4,425
3	9 – 10 am	630	561	586	551	589	630	588	4,135
4	10– 11am	649	598	520	581	673	607	517	4,145
5	11– 12am	727	612	592	514	747	628	461	4,281
6	12 – 1 pm	735	579	508	658	569	631	563	4,243
7	1 – 2 pm	664	581	580	461	592	451	551	3,480
8	2 – 3 pm	668	620	603	572	680	619	561	4,323
9	3 – 4 pm	662	681	608	469	560	632	605	4,217
10	4 – 5 pm	702	670	603	661	660	602	622	4,520
11	5 – 6 pm	720	681	551	661	671	514	693	4,491
12	6 – 7 pm	630	679	592	563	651	581	523	4,219
		8,424	6,867	6,883	6,842	7,627	7,028	6,775	

The above weekly traffic count showed that the highest daily traffic count in a week was recorded on Monday with 8424 vehicles. This revealed that most commuters come in from other parts of the State in order to carry out their official and commercial activities due to the strategic location of the area as the Cross River State Capital, Nigeria. The least daily was recorded on Sunday with 6775 vehicles. Furthermore, the highest hourly recorded vehicles was between 5-6pm with 693 vehicles while the least was between 11-12pm.

Table 5: Summary of Pearson product moment correlation

(X) Registered vehicles	(Y)Traffic Volume	$(x - \bar{x})$	$(y - \bar{y})$	$(x - \bar{x})^2$	$(y - \bar{y})^2$	r	t cal. Table	T table value
$\sum = 1,720$ $\bar{x} = 246$	$\sum = 50,446$ $\bar{y} = 7,207$	$\sum = 536$	$\sum =$ 282,141	$\sum =$ 51,830	$\sum =$ 2,2229,308	0.84	4.704	@0.05 = 2.45

The above summary of Pearson product moment correlation coefficient of 0.84 showed that there is a strong and positive relationship between obtained traffic volume and registered vehicles. This means that the volume of traffic increases vis-à-vis the rising trend of registered vehicles. Further investigation also showed that the relationship did not occur by chance since the calculated value of 4.704 was more than the table value at 0.05 two tailed tests. This can also be explained as independent variables has the capacity to influence the volume of traffic by 84.00%. It therefore demands a strategic effort in making public and commercial transport sector more viable and effective in order to attract large number of passengers rather depend much on the private vehicles.

Conclusion and Recommendation

This study was on assessment of relationship between trend of registered vehicles and road traffic volume in Calabar metropolis, Nigeria. Data of registered vehicles between 2012-2018

were obtained from Cross River State Bureau of Statistics and Internal Revenue Service. Traffic volume was obtained from a major highway (Murtala Mohammed Highway) through a one-week traffic count within the metropolis. The assessment of relationship between registered vehicles and traffic volume analyzed using the Pearson product moment correlation. The outcome of the correlation coefficient of 0.84 showed a strong and positive relationship between the two variables.

Based on this, it is recommended that there is need to increase and improve on the available road furniture and infrastructure in a continuous basis to catch up with the increasing trend of registered vehicles. Moreover, arising from this outcome, there is need to introduce effective and efficient paid parking system within the metropolis to discourage the number of private vehicles brought in by commuters to the central business district (CBD). It is also recommended that better mass transit transportation be put in place so as to reduce the required number of vehicles on the road at a time.

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The Effect of Banditry Activities on the Livelihood of Rural Communities in Shiroro Local Government Area of Niger State, Nigeria

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Abstract

The study was carried out to assess the effect of banditry activities on the livelihood of rural communities in Shiroro Local Government Area of Niger State, Nigeria. The objectives were to identify factors responsible for the upsurge of banditry activities, determine the effect of banditry on economic activities, ascertain type of crimes committed by the bandits and to identify methods that can be employed to curtail banditry. The purposive sampling was used to select the study area and simple random sampling technique was used to select eight wards out of fifteen wards in the local government, a total of 400 questionnaires were randomly administered. However, 373 questionnaires were retrieved. Findings revealed that crimes committed by bandits in the study area range from cattle rustling, kidnapping, rape, murder and looting of farm produce. The economic effect of banditry in the area led to impracticability of farming, trading and businesses activities, loss of livestock and limited natural resources. Factors responsible for the upsurge in banditry in the study area include; insecurity, abundance of weapons, vulnerability of areas, rural poverty, corruption, greed, political interference, land dispute. Finally on ways to minimize challenges of banditry respondents suggested reporting of suspicious persons, intelligence gathering, tackle corruption, poverty reduction and increase security level. The study recommended that constant and effective deployment of adequate number of security personnel to the affected communities to checkmate the illegal activities of the rural bandits, government should set up effective modalities to retrieve/recover the unlawfully possessed fire arms from wrong hands and government to encourage dialogue and reconciliation among the different ethnic groups in the respective communities affected by the problem of rural banditry, Discrimination and marginalization should be addressed with ultimate sense of responsibilities and accountability.

Keywords: *Assessing, Banditry, Livelihood and Effect*

Background to the Study

In recent times, there has been a dramatic increase in the spate of conflict between herdsmen and farming communities, alongside the impendent problems of rural banditry and cattle rustling. This increase in conflict results from increasing sedentarisation along grazing routes, increase sedentarisation could be seen as pastoralist communities' response to the numerous challenges they are facing. Sedentarisation has been one means of adapting to changing conditions over time (Adekunle, 2014).

The tendency to blame nomadic herders for the problems they bring as an occupational group is reinforced by perspectives like the 'cattle complex' and the 'tragedy of the commons' in the academic research on pastoralism. Iyorchia, (2014), The cattle complex concerns environmental damage that harms pastoral societies. The environmental damage is attributed to inefficient traditional methods of raising livestock, and herders' penchant to keep large number of animals beyond their economic and reproductive functions. (Iro, 2015). Rural banditry has become a major concern for public policy in contemporary Nigeria. It refers to the practice of stealing cattle and animals from herders. Although driven by different needs and factors, it is increasingly an economically-based form of criminality perpetuated by informal networks (Kwaja, 2013). Rural banditry thrives as a means of 'primitive' accumulation of cowherds in the context of subsistence and commercial pastoralist. The most disturbing effect of this banditry is the unsealing of pastoralist transhumant activities. Furthermore, rural banditry is accompanied by rape, kidnapping, organized attacks on villages and communities, and looting.

Rural banditry intersects with several other important themes in the Nigerian political economy. Which are; the problems of human and national security; altered balance in state-society relations; the impact of climate change on agricultural practices and different occupational groups; the emerging challenge of food security and the modernization of agriculture; and the question of intergroup relations and social harmony in Nigeria's diverse and plural context, even more important is the impact of cattle rustling on livestock production. Livestock production is not only a significant aspect of agriculture in Nigeria's quest to diversify its economy, but also remains crucial to the overall wellbeing of pastoralist communities, particularly the nomadic Fulani herders. Also in recent period, rural banditry and violent conflict between pastoralists and farmers in Nigeria have been on the rise. This social conflict has traditionally consisted of dispute over natural resources and is often presented as a conflict between pastoralists and farmers over land that has recently developed into rural banditry with heavy human and economic cost, ranging from the sexual assault of women and girls, attacks on villages and cattle rustling, among others (Jibrin, 2015).

Rural banditry appears to be tied to the incessant conflict between Fulani herdsmen and farmers. The conflict may be connected to the wider context of identity, politics and intergroup relations, including the relationships between pastoralist groups on the one hand and the Nigeria state system on the other. Transhumant pastoralists are perceived as violent and deliberately armed to deal with unsuspecting crop farmers and the farmers allege intentional crop damage by animals. The herders, on the other hand, perceive themselves to be victims of

political marginalization, lacking a voice within the Nigeria state system. The exclusion of nomadic Fulani herders from the policy process and their lack of voice are so acute that the Miyeti Allah Cattle Breeders Association (MACBA), an urban-based Fulani pressure group, stands as the only known civic group that engages in policy advocacy on their behalf. '

The effect of banditry has left many scars on the people of the community with complicating and porous security architecture that has forced many residents to flee their homes and migrate to neighboring villages for safety, food shortages, destruction of lives, farm produce and properties with internally displaced camps (IDP) being flooded with refugees dying of starvation and disease on a daily basis. The study finds it necessary for the Government to create an enabling environment that would ensure safety of its people and their properties with constant and effective deployment of adequate number of security personnel to the affected communities to checkmate the illegal activities of the rural bandits.

Objectives

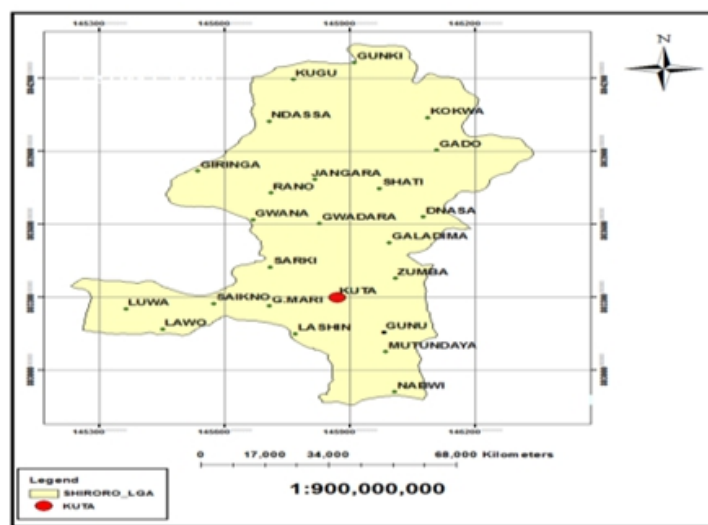
The following objectives were: To

- i. Identify factors responsible for the upsurge of banditry activities in Shiroro Local Government
- ii. Ascertain type of crimes committed by the bandits
- iii. Examine the effect of banditry on economic activities in the community
- iv. Identify methods that can be employed to curtail banditry.

Study Area

Shiroro is a Local Government Area in Niger State, Nigeria. Its headquarters is at Kuta, located within latitude 9° 53' 2.39" N and longitude 6° 49' 4.19". It has an area of 5,015 square kilometers (1,936 sq mil) and a population of 235,404 according to the 2006 census. The area is made up of relatively low and undulating land surface with some hills such as Bodo hill, Kuta Bare- Kuta hill and Reggae hill among others. The major river in the study area is 12. River Kaduna on which Shiroro dam was built. The annual rainfall of the area varies between 1100mm and 1600mm. The area is found in guinea savanna. (<http://naijasky.com/shiroro/72/shiroro-local-government/9720/>).

Figure 1: The study area (Shiroro Local Government Area, Niger State)



Source: Department of Geography (Remote Sensing Unit) FUT Minna

Methodology

The purposive sampling technique was used in selecting the study area based on the number of wards present in the local government and also how frequently banditry activities occur in the area. The research design used a descriptive survey with the application of questionnaire as an instrument for the collection of data as the area has experienced challenges as a result of banditries. There are a total of fifteen wards in the local government with a population of 235,404 (census, 2006). Eight wards were selected at random these are Gurmana, Madaka, Kokoki, Magani, Alawa, Kurebe, Maganda and Magami. A total of 400 questionnaires were randomly administered. However, 373 questionnaires were retrieved at the Internally Displaced People (IDP) in Kuta. Interview was also carried out to illicit the information from the respondents. The result obtained was analyzed using descriptive statistics.

Findings

Table 1: Factors Responsible for the Upsurge in Banditry in the Study Area

Ward	Upsurge in banditry													
	Insecurity		Abundance of weapons		Vulnerability of areas		Rural poverty		Corruption		Political interference		Land dispute	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Gurmana	17	28.8	5	8.5	7	11.9	11	18.6	8	13.6	6	10.2	5	8.5
Madaka	4	8.0	3	6.0	7	14.0	10	20.0	13	26.0	9	18.0	4	8.0
Kokoki	3	8.6	4	11.4	5	14.3	7	20.0	8	22.9	4	11.4	4	11.4
Magani	7	13.7	4	7.8	6	11.8	11	21.6	6	11.8	13	25.4	4	7.8
Alawa	8	15.4	7	13.5	9	17.3	9	17.3	2	3.8	13	25.0	4	7.7
Kurebe	5	10.6	4	8.5	2	4.3	12	25.5	10	21.3	9	19.1	5	10.6
Maganda	6	12.2	10	20.4	6	12.2	12	24.5	8	16.3	6	12.3	1	2.0
Magami	3	10.0	9	30.0	5	16.7	2	6.7	4	13.3	5	16.6	2	6.7

Source: Field Work 2020

Table 1 provided information on factors responsible for the upsurge of banditry in the area, and in Gurmana 28.1% believed that insecurity was the major cause, 8.5% blamed the abundance of sophisticated weapons, 11.9% were for vulnerability of the area, 18.6% stated that rural poverty, 13.6% faulted corruption, 6.8% hit political interference and 8.5% agreed land dispute. In Madaka 8.0% believed that insecurity is the major cause, 6.0% abundance of sophisticated weapons, 14.0% vulnerability of the area, 20.0% rural poverty, 26.0% corruption, 6.0% political interference and 8.0% land dispute. In Kokoki 8.6% insecurity, 11.4% abundance of sophisticated weapons, 14.3% vulnerability of the area, 14.3% rural poverty, 20.0% corruption, and political interference and 11.4% land dispute. In Magani 13.7% insecurity was the major cause, 7.8% abundance of sophisticated weapons, 11.8% vulnerability of the area, 21.6% rural poverty, 11.8% corruption, 7.8% political interference and land dispute. In Alawa 15.4% believed that insecurity is the major cause, 13.5% abundance of sophisticated weapons, 17.3% vulnerability of the area, 17.3% rural poverty, 3.8% corruption, 11.5% political interference and 7.7% land dispute. In Kurebe 10.6% believed that insecurity is the major cause, 8.5% abundance of sophisticated weapons, 4.3% vulnerability of the area, 25.5% rural poverty, 21.3% corruption, 8.5% political interference and 10.6% land dispute. In Maganda 12.2% believed that insecurity is the major cause, 20.4% abundance of sophisticated weapons, 12.2% vulnerability of the area, 24.5% rural poverty, 16.3% corruption, 8.2% political interference and 2.0% land dispute. In Magami 10.0% believed that insecurity was the major cause to upsurge in banditry, 30.0% abundance of sophisticated weapons, 16.7% of the respondents believed vulnerability of the area to attacks contributes to the upsurge in banditry attacks, 6.7% rural poverty, 13.3% corruption, 13.3% political interference and 6.7% of the respondents revealed that land dispute contributes to the upsurge in attacks. This finding is related to the findings of Muhammad (2017) on the upsurge of banditry and cattle rustling showed that vulnerability of the area, proliferation of lethal weapons like short guns, rifles, machine guns and other assault rifles in the hands of potential rustlers was responsible for the frequent attacks in the area.

Table 2: Crimes Committed by Bandits in the Study Area

Ward	Crimes committed									
	Cattle rustling		Kidnapping		Rape		Murder		Looting of farm produce	
	F	%	F	%	F	%	F	%	F	%
Gurmana	20	33.9	21	35.6	9	15.2	3	5.1	6	10.2
Madaka	18	36.0	12	24.0	5	10.0	12	24.0	3	6.0
Kokoki	12	34.3	8	22.9	6	17.1	7	20.0	2	5.7
Magani	12	23.5	19	37.3	10	19.6	6	11.8	4	7.8
Alawa	20	38.5	11	21.2	4	7.7	12	23.1	5	9.6
Kurebe	10	21.3	21	44.7	7	14.9	4	8.5	5	10.6
Maganda	17	34.7	10	20.4	8	16.3	7	14.3	7	14.3
Magami	10	33.3	10	33.3	4	13.3	3	10.0	3	10.0

Source: Field Work 2020

Table 2 revealed information on various crimes committed by the bandits during attacks. In Gurmana, 33.9% of the respondents explained that the bandits indulged in cattle rustling,

35.6% explained that they kidnapped respondents, 15.2% of the respondents reported that they engaged in raping, 5.1% reported cases of murder and 10.2% of the respondents lamented on looting of their farm produce. In Madaka 36.0% of the respondents explained that the bandits indulged in cattle rustling, 24.0% explained that they kidnapped respondents, 10.0% of respondents reported that they engaged in raping, 24.0% reported case of murder and 6.0% of the respondents lamented on looting of their farm produce. In Kokoki 34.3% reported cases of the respondents explained that the bandits indulged in cattle rustling, 22.9% reported cases of kidnapping, 17.1% of the respondents reported that they engaged in raping, 20.0% reported cases of murder and 5.7% of the respondents lamented on looting of their farm produce. Magani 23.5% of the respondents explained that the bandits indulged in cattle rustling, 37.3% kidnapped, 19.6% of the respondents reported that they engage in raping, 11.8% reported case of murder and 7.8% looting of farm produce. In Alawa 38.5% of the respondents explained that the bandits indulge in cattle rustling, 21.2 explained that they kidnapped respondents, 7.7% e raping, 23.1% reported case of murder and 9.6% of the respondents lamented on looting of their farm produce. In Kurebe 21.3% of the respondents explained that the bandits indulged in cattle rustling, 44.7% explained that they kidnapped respondents, 14.9% of the respondents reported that they engage in raping, 8.5% reported case of murder and 10.6% of the respondents lamented on looting of their farm produce. In Maganda 34.7% of the respondents explained that the bandits indulged in cattle rustling, 20.4% explained that they kidnapped respondents, 14.3% reported case of murder and 14.3% of the respondents lamented on looting of their farm produce and in Magami 33.3% of the respondents explained that the bandits rustle their cattle's, 33.3% explained that they kidnapped respondents, 13.3% of the respondents reported that they engage in raping, 10.0% were for murder and 10.0% of the respondents lamented on looting of their farm produce.

Table 3: Effect of Banditry on Community

Ward	Effect of banditry on community											
	Prevents farming activities		Prevent livestock rearing		Hinders hunting		Communal conflict		Loss of livelihood/income		Lower standard of living	
	F	%	F	%	F	%	F	%	F	%	F	%
Gurmana	22	37.3	10	16.9	6	10.2	5	8.5	11	18.6	5	8.5
Madaka	15	30.0	7	14.0	5	10.0	4	8.0	15	30.0	4	8.0
Kokoki	9	25.7	7	20.0	3	8.6	3	8.6	11	31.4	2	5.7
Magani	14	27.5	5	9.8	5	9.8	7	13.7	13	25.5	7	13.7
Alawa	21	40.4	6	11.5	6	11.5	3	5.8	11	21.2	5	9.6
Kurebe	17	36.2	4	8.5	2	4.5	5	10.6	16	34.0	3	6.4
Maganda	12	24.5	5	10.2	5	10.2	6	12.2	17	34.7	4	8.2
Magami	10	33.3	2	6.7	5	16.7	3	10.0	7	23.3	3	10.0

Source: Field Work 2020

Table 3 showed detail on effect of banditry on the community. In Gurmana, 37.3% revealed that banditry prevents farming, 16.9% prevents lives stock rearing, 10.2% hinders hunting, 8.5% communal conflict, 18.6% loss of income and 8.5% lower the standard of living. In Madaka 30.0% prevented farming activities, 14.0% prevented lives stock rearing, 10.0%

hindering hunting, 8.0% communal conflict, 30.0% loss of income and 8.0% lower the standard of living. In Kokoki 25.7% prevented farming activities, 20.0% prevented lives stock rearing, 8.6% hindering hunting and brought about communal conflict, 31.4% loss of income and 5.7% lower the standard of living. In Magani 27.5% prevented farming activities, 9.8% prevented lives stock rearing and hindering hunting, 13.7% communal conflict, 25.5% loss of income and 13.7% lower the standard of living. In Alawa 40.4% prevented farming activities, 11.5% prevented lives stock rearing and hindering hunting, 5.8% communal conflict, 21.2% loss of income and 9.6% lower the standard of living. In Kurebe 36.2% of the respondents revealed that the effect prevented farming activities, 8.5% prevented lives stock rearing, 4.5% hindering hunting, 10.6% communal conflict, 34.0% loss of income and 6.4% explained that it lowers the standard of living of the people. In Maganda 24.5% prevented farming activities, 10.2% prevented lives stock rearing and hindering hunting, 12.2% communal conflict, 34.7% loss of income and 8.2% lower the standard of living of the people. In Magami 33.3% prevented farming activities, 6.7% prevented lives stock rearing, 16.7% hindering hunting, 10.0% communal conflict, 23.3% loss of income and 10.0% lower the standard of living of the people. This finding is in line with the findings of Bashir, (2017) which states that the activities of cattle rustling and banditry has had major impact on the community. It has resulted to conflict related deaths, immigration, internally displaced persons (IDP), intolerance between communities, high number of police patrol and military personnel, human rights abuse, sexual assault and rape have also increased, arrest and detention of the common people without probable cause or warrant.

Table 4: Economic Effect of Banditry

Ward	Economic Effect							
	Farming become impracticable		Trading and businesses not feasible		Loss of livestock		Limited natural resources	
	F	%	F	%	F	%	F	%
Gurmana	23	38.9	17	28.8	13	22.0	6	10.2
Madaka	30	60.0	12	24.0	5	10.0	3	6.0
Kokoki	17	48.6	10	28.6	6	17.1	2	5.7
Magani	16	31.4	20	39.2	11	21.6	4	7.8
Alawa	23	44.2	11	21.1	12	23.1	6	11.5
Kurebe	14	29.8	21	44.7	7	14.9	5	10.6
Maganda	21	42.9	13	26.5	8	16.3	7	14.3
Magami	10	33.3	13	43.3	4	13.3	3	10.0

Source: Field Work 2020

Table 4 provided information on the economic effect of banditry on the affected community. In Gurmana 38.9% of the respondents explained that farming activities came impracticable, 28.8% asserted that trading and businesses not feasible, 22.0% loss of livestock and 10.2% the attacks resulted to limited natural resource in the area. In Madaka 60.0% of the respondents explained that farming activities came impracticable, 24.0% asserted that trading and businesses not feasible, 10.0% loss of livestock and 6.0% said that the attacks resulted to limited natural resource in the area. In Kokoki 48.6% of the respondents explained that farming activities became impracticable, 28.6% agreed that trading and businesses not

feasible, 17.1% loss of livestock and 5.7% stated that the attacks resulted to limited natural resource in the area. In Magani 31.4% of the respondents explained that farming activities came impracticable, 39.2% asserted that trading and businesses not feasible, 21.6% loss of livestock and 7.8% agreed that the attacks resulted to limited natural resource in the area. In Alawa 44.2% of the respondents explained that farming activities came impracticable, 21.1% agreed that trading and businesses not feasible, 23.1% loss of livestock and 11.5% stated that the attacks resulted to limited natural resource in the area. In Kurebe 29.8% of the respondents explained that farming activities came impracticable, 44.7% asserted that trading and businesses not feasible, 14.9% loss of livestock and 10.6% agreed that the attacks resulted to limited natural resource in the area. In Maganda 29.8% of the respondents explained that farming activities came impracticable, 44.7% agreed that trading and businesses not feasible, 14.9% loss of livestock and 10.6% asserted that the attacks resulted to limited natural resource in the area. In Magami 33.3% of the respondents explained that farming activities came impracticable, 43.3% agreed that trading and businesses not feasible, 13.3% loss of livestock and 10.0% asserted that the attacks resulted to limited natural resource in the area. This finding is supported by the findings of (Shehu, Suleiman, Victor, and Binta, 2017) who observed that the populace have suffered devastating effects of the activities especially in the targeted communities and the state at large and these include killing of hundreds of innocent people, high rate of economic lost, food and other livestock either destroyed or stolen from the affected areas, houses and places of worships are been the target of these hoodlums which led to the crippled investment opportunity, movement of goods and other agricultural product is no longer possible considering the fact people and even the security agencies are been attacked on the daily basis while farmlands are equally destroyed even before harvest and the hope for agricultural is almost dashed out.

Table 5: Efforts set up by the Community to Curb Banditry

Ward	Efforts							
	Community peace meeting		Vigilante /volunteer		Cooperation with other communities		Reporting criminal activities	
	F	%	F	%	F	%	F	%
Gurmana	7	11.9	12	20.3	19	32.2	21	35.6
Madaka	6	12.0	4	8.0	26	52.0	14	28.0
Kokoki	9	25.7	6	17.1	8	22.8	12	34.8
Magani	4	7.8	7	13.7	13	25.5	27	52.9
Alawa	11	21.1	8	15.4	12	23.1	21	40.4
Kurebe	12	25.5	5	10.6	12	25.5	18	38.3
Maganda	11	22.4	8	16.3	15	30.6	15	30.6
Magami	7	23.3	3	10.0	11	36.7	9	30.0

Source: Field Work 2020

On efforts being setup by the community to curb banditry in the area, information obtained revealed that in Gurmana 11.9% of the respondents explained that community peace meeting should be initiated 20.3% stated that vigilante/volunteer should be formed 32.2% agreed that cooperation with other communities and 35.6% of the respondents believed that reporting

criminal activities would go a long way to tackle the menace. In Madaka 12.0% of the respondents explained that community peace meeting, 8.0% vigilante/volunteer, 52.0% cooperation with other communities and 28.0% reporting criminal activities. In Kokoki 25.7% of the respondents explained that community peace meeting, 17.1% vigilante/volunteer, 22.8% cooperation with other communities and 34.8% reporting criminal activities. In Magani 7.8% of the respondents explained that community peace meeting, 13.7% vigilante/volunteer, 25.5% cooperation with other communities and 52.9% reporting criminal activities. In Alawa 21.1% of the respondents explained that community peace meeting, 15.4% vigilante/volunteer, 23.1% cooperation with other communities and 40.4% reporting criminal activities would help tackle the menace. In Kurebe 25.5% of the respondents explained that community peace meeting, 10.6% vigilante/volunteer, 25.5% cooperation with other communities and 38.3% reporting criminal activities. In Maganda 22.4% of the respondents explained that community peace meeting, 16.3% vigilante/volunteer, 30.6% cooperation with other communities and 30.6% reporting criminal activities. In Magami 23.3% of the respondents explained that community peace meeting, 10.0% vigilante/volunteer, 36.7% cooperation with other communities and 30.0% of the respondents believed that reporting criminal activities would go a long way to tackle the menace.

Table 6: People Involved in Banditry and Sources of Their Weapons

Location	People involved in banditry						Sources					
	Local nomads		Foreign nomad		Rural bandits		Illegal arm dealer		Rural bandits/armed robbers		Foreign nomads	
	F	%	F	%	F	%	F	%	F	%	F	%
Gurmana	24	40.7	15	25.4	20	33.9	26	44.1	24	40.7	9	15.2
Madaka	30	60.0	15	30.0	5	10.0	11	22.0	34	68.0	5	10.0
Kokoki	20	57.1	3	8.6	12	34.3	12	34.3	17	48.6	6	17.1
Magani	19	37.3	9	17.6	23	45.1	16	31.3	24	47.1	11	21.6
Alawa	14	26.9	12	23.1	26	50.0	11	21.1	29	55.8	12	23.1
Kurebe	14	29.8	7	14.9	26	55.3	15	31.9	25	53.2	7	14.9
Maganda	27	55.1	8	16.3	14	28.6	21	42.8	20	40.8	8	16.3
Magami	13	43.3	6	20.0	11	36.6	10	33.3	16	53.3	4	13.3

Source: Field Work 2020

Details on people involved in banditry and their major sources of weapons were depicted on table 6. In Gurmana, 40.7% explained that local nomads were involved in the banditry attacks, 25.4% foreign nomads while 33.9% rural bandits. In Madaka 60.0% explained that local nomads were involved in the banditry attacks, 30.0% foreign nomads while 10.0% of the respondents revealed rural bandits were behind the continual attacks. In Kokoki 57.1% of the respondents explained that local nomads were involved in the banditry attacks, 8.6% revealed that foreign nomads behind that attacks and 34.3% rural bandits behind that attacks. In Magani 37.3% local nomads, 17.6% revealed foreign nomads behind that attacks while 45.1% rural bandits. Alawa 26.9% local nomads, 23.1% revealed that foreign nomads behind that attacks while 50.0% rural bandits. Kurebe 29.8% of the respondents explained that local

nomads were involved in the banditry attacks, 14.9% foreign nomads while 55.3% revealed that rural bandits behind that attacks. Maganda, 55.1% local nomads, 16.3% foreign nomads while 28.6% rural bandits. Magami 43.3% of the respondents explained that local nomads were involved in the banditry attacks, 20.0% foreign nomads while 36.6% of the respondents revealed that rural bandits were the behind the continual attacks.

On information regarding were these bandits sourced their weapons, in Gurmana 44.1% of the respondents revealed that the bandits sourced their weapons from illegal arm dealers, 40.7% revealed that the source is from rural bandits and 15.2% revealed that the source is from foreign nomads. In Madaka 22.0% from illegal arm dealers, 68.0% revealed that the source is from rural bandits and 10.0% revealed that the source is from foreign nomads. In Kokoki, 34.3% illegal arm dealers, 48.6% revealed that the source is from rural bandits and 17.1% revealed that the source is from foreign nomads. In Magani 31.3% of respondents revealed that the source is from illegal arm dealers, 47.1% rural bandits and 21.6% foreign nomads. In Alawa 21.1% revealed that the bandits sourced their weapons from illegal arm dealers, 55.8% revealed that the source is from rural bandits and 23.1% revealed that the source is from foreign nomads. In Kurebe 31.9% illegal arm dealers, 53.2% from rural bandits and 14.9% revealed that the source is from foreign nomads. In Maganda 42.8% revealed that the source is from of the respondents revealed that the bandits source their weapons from illegal arm dealers, 40.8% revealed that the source is from rural bandits and 16.3% revealed that the source is from foreign nomads. In Magami 33.3% of the respondents revealed that the bandits source their weapons from illegal arm dealers, 53.3% revealed that the source is from rural bandits and 13.3% revealed that the source is from foreign nomads.

Table 7: Assistance from Government and Non-Governmental Organizations and Type of Assistance

Ward	Type of assistance							
	Food items		Medical supply		Clothing		Sleeping materials	
	F	%	F	%	F	%	F	%
Gurmana	20	42.6	24	51.1	7	14.9	6	12.8
Madaka	20	50.0	11	27.5	5	12.5	4	10.0
Kokoki	13	44.8	11	37.9	2	6.9	3	10.3
Magani	18	46.2	10	25.6	9	23.1	2	5.1
Alawa	11	25.0	14	31.8	12	27.2	7	15.9
Kurebe	17	53.1	5	15.6	2	6.3	8	25.0
Maganda	20	48.8	10	24.4	3	7.3	8	19.5
Magami	9	42.9	6	28.6	4	19.0	1	4.8

Source: Field Work 2020

Findings on the type of assistance rendered to the respondents as a relief to them on the loss of properties by government and Non-governmental organizations during bandit attacks. In Gurmana 42.6% of the victims received food items, 51.1% received medical supply, 14.9% received clothing material and 12.8% received sleeping materials. In Madaka 50.0% of the

victims received food items, 27.5% received medical supply, 12.5% received clothing material and 10.0% received sleeping materials. In Kokoki 44.8% of the victims received food items, 37.9% received medical supply, 6.9% received clothing material and 10.3% received sleeping materials. In Magani 46.2% of the victims received food items, 25.6% received medical supply, 23.1% received clothing material and 5.1% received sleeping materials. In Alawa 25.0% of the victims received food items, 31.8% received medical supply, 27.2% received clothing material and 15.9% received sleeping materials. In Kurebe 53.1% of the victims received food items, 15.6% received medical supply, 6.3% received clothing material and 25.0% received sleeping materials. In Maganda 48.8% of the victims received food items, 24.4% received medical supply, 7.3% received clothing material and 19.5% received sleeping materials. In Magami 42.9% of the victims received food items, 28.6% received medical supply, 19.0% received clothing material and 4.8% received sleeping materials.

Table 8: Ways to Minimize Banditry and Improve Livelihood of the Community

Ward	ways to minimize challenges of banditry									
	Report suspicious persons		Intelligence gathering		Tackle corruption		Poverty reduction		Increase security level	
	F	%	F	%	F	%	F	%	F	%
Gurmana	7	11.9	12	20.3	3	5.1	21	35.6	16	27.1
Madaka	6	12.0	4	8.0	4	8.0	10	20.0	26	52.0
Kokoki	9	25.7	6	17.1	8	22.8	2	5.7	10	28.6
Magani	4	7.8	7	13.7	10	19.6	3	5.9	27	52.9
Alawa	2	3.8	8	15.4	10	19.2	11	21.1	21	40.4
Kurebe	12	25.5	5	10.6	12	25.5	6	12.8	12	25.5
Maganda	11	22.4	7	14.3	8	16.3	8	16.3	15	30.6
Magami	5	16.7	3	10.0	2	6.7	9	30.0	11	36.7

Source: Field Work 2020

Table 8 revealed responses of the respondents on ways to minimize banditry attack in the area. In Gurmana 11.9% reporting suspicious persons, 20.3% suggested intelligence gathering, 5.1% opined on tackling corruption, 35.6% supported poverty reduction and 27.1% increase in level of security. In Madaka 12.0% reporting suspicious persons, 8.0% intelligence gathering, 20.0% poverty reduction and majority of the respondents 52.0% increase in the level of security. In Kokoki 25.7% reporting suspicious persons, 17.1% suggested intelligence gathering, 22.8% tackling corruption, 5.7% poverty reduction and 28.6% increase in the level of security. In Magani 7.8% reporting suspicious persons, 13.7% intelligence gathering, 19.6% tackling corruption would help to minimize banditry attacks in the area, 5.9% supported poverty reduction and 52.9% agreed on increase in the level of security. In Alawa 3.8% of the respondents were in support of reporting suspicious persons, 15.4% suggested intelligence gathering, 19.2% believed that tackling corruption would help to minimize banditry attacks in the area, 21.1% supported poverty reduction and 40.4% agreed on increase in the level of security. In Kurebe 25.5% of the respondents were in support of reporting suspicious persons, 10.6% suggested intelligence gathering, 25.5% tackling corruption, 12.8% supported poverty reduction and 25.5% of the respondents believed on increase in level of security. In Maganda

22.4% reporting suspicious persons, 14.3% supported intelligence gathering, 16.3% supported tackling corruption and poverty reduction while 30.6% agreed on increase in the level of security. In Magami 16.7% 11.9% reporting suspicious persons, 10.0% suggested intelligence gathering, 6.7% tackling corruption, 30.0% supported poverty reduction and 36.7% of the respondents believed that increase in the level of security would help to curb the attacks. This finding relates to the findings of Muhammed 2017 who observed some precautionary measures adopted by the community to curtail or minimize banditry and cattle rustling which include utilizing the local vigilante groups to protect the vulnerable areas and prevented theft of livestock, self defense and encourage local communities to organize local patrols to prevent incursion of cattle rustlers in to their areas.

Conclusion

The major causes of banditry in Shiroro Local Government Area of Niger State are multi-faceted and they include: abundance of fire arms among the Fulani herdsmen, greed, insecurity, political interference and poverty. The crimes committed by these bandits in the study area range from cattle rustling, kidnapping, rapping, murder and looting of farm produce. The outstanding socio-economic impacts of banditry are: disruption of economic activities, fall in rural businesses due to fear of indiscriminate attacks while on transit to and fro rural markets. Farming which is the main stay of the rural economy has been greatly affected due to fear of attacks and lack of safety while in the farmland. In some instances, bandits do attack farmers while cultivating their farmland injuring or even killing them and usually carted away their tools which they are using to plough their farmland and escaped to the nearby forest.

These lack of safety and security challenges have prompted the mass migration of respondents and rural dwellers away from the affected districts to nearby villages. Some affected persons ran to safety in the IDP camp in Central Primary School Kuta.

Recommendation

1. Development and adoption of community policing and strategic synergy between grassroots vigilantes and security operatives who have better understanding of the terrain
2. Shot on site policy against persons or groups in possession of illegal fire arm
3. There should be framework avails opportunities for this to be integrated irrespective of socio-educational status. The opportunities include different of vocational/livelihood trainings for income generating activities, functional literacy programmes for young person's missing education, life building skills and health education services that will strengthen their resistance to participate in social vices and address their reproductive health needs.
4. Discrimination and marginalization should be addressed with ultimate sense of responsibilities and accountability.
5. The prevailing approach to provision and distribution of infrastructure facilities and social amenities need to be seriously reassessed, appropriate strategies of community participation and people oriented programming that will encourage creativity,

- maintenance and sustenance of facilities should be evolved, and a sense of ownership developed.
6. There should be constant and effective deployment of adequate number of security personnel to the affected communities to checkmate the illegal activities of the rural bandits.
 7. Introduction of national centre for control of small arms and light weapon for the disarmament and recovery of unlawfully possessed fire arms from wrong hands. These unlawfully possessed fire arms certainly precipitated the increasing attacks on rural communities in the affected districts and the rustling of their livestock by the cattle rustlers who operate with high degree of impunity because of their fire power which the villagers/rural vigilante cannot dare to confront them.
 8. The Government should create an enabling environment for local jobs creation at the village level for the teeming unemployed youths. Rural poverty has been pervasive in recent years; youths that supposed to be engage in different aspects of rural economy are now left roaming about in the rural community without doing anything, this and many more has contributed in the upsurge in rural banditry as they are striving to make a livelihood out of the criminal loots due to non-availability of opportunity for rural employment.

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Climate Change Effect on Rainfall Pattern and Implications for Maize Production in Afikpo North Local Government Area of Ebonyi State, Nigeria

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Abstract

Climate change has impacted rainfall and its distribution. It has impacted also human's livelihood and this calls for measures to help improve on the situation. The purpose of this study was to generate data/information on the current pattern and distribution of rainfall in Afikpo North Local Government Area (LGA) of Ebonyi State for the year, 2020. The study employed simple random and purposive sampling procedures. The LGA is made up of twelve (12) Autonomous Communities (ACs). Ten (10) ACs were randomly selected which represent about 80% of the total ACs. Field Assistants (FAs) were required for the field work and two (2) FAs were purposively selected from each of the 10 ACs to give a total of 20 FAs who helped record relevant parameters. A self-designed recording instrument was used in the field work and data generated were analyzed using descriptive statistics. The result shows that the rains commenced early in the year and were not evenly distributed in the first four months of the year. The result also shows that much rainfall which were fairly distributed were experienced in the months of June, July and September. Recommendations, among others, are that farmers should be convinced to commence actual maize cultivation from the month of May and provide water through irrigation practices to make up during periods of water shortage.

Keywords: *Climate Change, Rainfall Pattern, Implications, Maize Production*

Background to the Study

In the wake of the concern for food security and sustainable development, one of the crucial issues is the right of rural communities to a clean environment that enables them to have a sound basis for their livelihood and their living conditions (Akpaeti, Udo and Bassey, 2014). In the beginning, man's greatest need was to preserve his life and that of his posterity (Eze and Ogbonna, 2011). This caused him to evolve ideas that helped him improve his conditions. Naturally, man has been endowed with creative power that places him a little higher than other living organisms. It is this intelligence, the creative power that made him realize the importance of agriculture. Agriculture, hence, became the oldest industry.

The primitive man or early man lived on wild animals, leaves, roots, seeds and fruits but with increased population, food supply was not sufficiently stable or obtained (Eze et al, 2011). Crop production began when domestication of plants became essential so as to supplement natural supply. Agriculture, no doubt, is an art as well as science of crops and animal husbandry. It can also be referred to as the controlled production of plants, animals and materials which are of essential benefits to man. As an art, it requires certain field activities which need skill, constant practice and technical know-how. Being a science, it requires the study of the nature and life activities of crops and animals. To this perspective, there is the need of environmental factors. This is because the knowledge of the nature of these factors will be of immense assistance in the understanding of the study of the nature and life activities of crops and animals. The understanding of the nature of the environmental factors will also lend support in the art of carrying out field activities as well as managing the field aspect. The good knowledge and understanding of their environment will also help farmers to be adequately guided in the planning and efficient execution of their farming activities. Currently, climate change has caused changes (deviations) in the usual patterns of the environmental factors, especially rainfall, which are of immense assistance in the production of crops and animals. And it is to assist in proffering solution to the above discouraging situation that prompted this study.

Statement of the Problem

The environment plays a leading role in the adaptation of crops and farm animals to particular agricultural zones (Akinyosoye, 1999). The environmental factors mainly responsible can be divided into climatic, physical and biological factors. It should be borne in mind that, for any agricultural plant or animal to survive in any environment, it must be adapted to all the conditions prevailing there. In most cases, one factor plays a major role in determining the degree of adaptation of a crop or animal. This is why different agricultural crops and animals are found in different parts of the world. Owing to the variation in environmental conditions, crops and farm animals which are adapted to temperate zones are completely different from those of the tropics.

The understanding of the nature of the environmental factors will lend support to the farmers in the act of performing field activities. This will also help farmers to be adequately guided in the planning and efficient execution of their farming activities. But today, this knowledge and understanding of their immediate environmental conditions, especially rainfall pattern and distribution, appears to be a “mirage” to the farmers as a result of the impact or effect of

climate change. Climate change has caused considerable changes in the nature and patterns of the environmental factors and subsequently makes it difficult these days for the farmers to understand and follow in the planning of their farming activities (Oga and Oga, 2019). This situation has caused considerable losses of both farm and farmers' resources. Consequently, there is need to assist the farmers understand the present pattern and distribution of the environmental factors e.g. rainfall pattern and distribution. This will be in the form of providing for them data and information on the current pattern and distribution of these factors. This will then help and guide them on the future planning and execution of their farming activities. This position is in agreement with Asumugha, Mbanaso, Ironkwe, Nwosu and Okonkwo (2014) who asserted that agro-meteorological information is indispensable for the planning, development and utilization of the natural resources of any nation or community. It will equally help to avert losses of resources on the farm. This is also in agreement with the opinion of Asumugha, et al (2014) who asserted that agro-meteorological information help in reducing agricultural losses due to unfavorable weather and climatic conditions.

With the foregoing, this study tends to address the following research questions: What was the time of commencement of rainfall prior to the realities of climate change and currently; what is the frequency of rainfall in relations to the above pattern or situation; and what is the amount of rainfall (or duration of rainfall in hours) in the study area.

The main objective of this study was to generate data/information on the pattern and distribution of rainfall for the period the study covered. The specific objectives were: To determine the time of commencement of rainfall in the year 2020; to determine the frequency of rainfall for the same period; to determine the duration of rainfall in hours for the period 2020 and to determine the intensity (moderate or heaviness) of rainfall.

Methodology

This study was conducted in Afikpo North Local Government Area (LGA) of Ebonyi State of Nigeria in the year, 2020. The LGA covers an area of 240km and lies between latitude 45° East and longitude 60° North (EBADEP, 2013). In terms of vegetation, it is located in the high forest zone of Nigeria. This zone has an average width of about 130km and sometimes referred to as the rainforest belt. Rainfall varies from about 150 – 200cm in this zone. The actual vegetation shows a varied combination of different types of plants. It is an agrarian LGA with a good number of the populace engaged in one form of agricultural production or the other mainly at the 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. 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 season. 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).

Afikpo North Local Government Area (LGA) is made up of twelve (12) Autonomous Communities (ACs). Ten (10) Autonomous Communities were randomly selected for the field work and Field Assistants (FAs) were needed to assist in the work. Two FAs were purposively selected from each of the 10 Autonomous Communities to give a total number of 20 FAs who assisted in examining and recording the parameters considered relevant to the field work. The data generated were analyzed using descriptive statistics

Roles of Rainfall as Environmental Factor Affecting Crop Growth and Development

According to Eze and Ogbonna (2011), the roles of rainfall as environmental factor affecting crop growth and development are as follows:

Rainfall/Precipitation

Rainfall, which also may be referred to as precipitation is one of the climatic factors that influences global crop production. Rainfall or precipitation is the main source of water (moisture in the soil). Moisture in the soil aid in dissolution of nutrients made available to the plant. Water is the transport medium in plants. During transportation, essential nutrients are carried from the soil to sites in the shoots (i.e. upper parts of the plant) where they are used for growth and development or even stored. Water also causes rigidity of plant cells and hence provides mechanical strength to the plant. It is, as well, a component of major chemical process such as photosynthesis. In water stress condition, stomata closure results in reduced rate of exchange of CO₂ and photosynthesis. On the other hand, respiration rate increases in water stress situation resulting to high sugar levels in plants. Water decreases temperature in the soil and in plants. There is greater potential for crop production in those areas receiving adequate rainfall than in areas with very limited amount of precipitation. However, crop production in the areas with limited rainfall can be improved if additional water is supplied by irrigation.

Aspects of Rainfall Important to Crop Production

According to Eze et al, (2011) the aspects of rainfall important to crop production are as discussed below:

Amount/Total Precipitation:

This is the total amount of rain that falls over an area in a given period of time. Crops differ in their requirement for the amount of rainfall in their life span. Some crops need little water especially the arid crops like Sorghum (Guinea Corn) while some other crops will only perform well where there is plentiful of water, an example is rice which is almost a hydrophyte. The precipitation must be enough to satisfy a given water requirement, where this is less, the crop optimum yield is never attained.

Duration/Distribution

This is the length of time a given amount of precipitation is received in a given area. It is possible to have a long period of rainfall in a part of a county or region than in the other. For instance, an area may receive about 250mm of rain in 25 days whereas in another area the same amount of rain is received in 12days or even less. In situations like these, it will be said that rainfall in the former is better or evenly distributed than in the later. Each crop has its

lifecycle and therefore, the rainfall duration must meet up with the crop requirement, otherwise yield will be low. This also limits the area a crop can be grown. Rainfall duration in the North is always short compared to the south of Nigeria.

Intensity

This is the total amount accumulating during any given rainfall period. This shows how heavy the rain is. It also refers to its strength i.e. whether it is drizzle, moderate, torrential, etc. When the intensity is small i.e. drizzle, a little amount is received and very little part of it penetrates into the soil. This is as a result of the fact that the water is held on the surface of leaves and on the soil surface only to be lost rapidly by evaporation. On the other hand, a very intense rain (torrential) can fall so fast that a large proportion is lost through run off. A slow soaking rain (or moderate) is therefore the best as high proportion of it infiltrates into the soil for crop use. Heavy rains (torrential, as the case may be) can cause water logging and roots of many arable crops do not withstand long periods of water logged condition.

Humidity

The humidity of an area commonly measured in relative humidity is the amount of moisture in the atmosphere. The relative humidity is a measure of the percentage of vapour in terms of the percentage necessary to saturate the atmosphere at a particular temperature. It is very important in the sense that the range available at any given time moderates the temperature and moisture effects. Under very dry condition, the temperature effect is amplified. Under very high relative humidity, evaporation is slowed down and therefore, the loss of water is reduced. The relative humidity also indirectly affects crop production through its influence on pest and disease build up. High relative humidity favours pest and disease build up.

The Maize Crop

According to Akinyosoye (1999) maize is a grass and it belongs to the large family called *Gramineae*. The botanical name is *Zeamays*. It is grown throughout the tropics and in the temperate regions of the world.

Maize is cultivated throughout the tropics wherever the rainfall is adequate. It is one of the most important food crops of West Africa and is planted mainly by small-scale farmers. Maize is an essential part of the diet of many West African people. The maize plant can be fed to farm animals such as cattle, sheep and goats when it is young and fresh. The grains are used in the preparation of animal feed since they provide a rich source of carbohydrate, protein and oils.

The maize plant thrives when the environmental conditions are favourable. A rainfall of 75 – 150mm per annum is usually considered adequate (Akinyosoye, 1999). Maize is a warm-seasoned crop and is influenced by temperature, length of growing season, length of day, amount, distribution and efficiency of rainfall is critical from 15 – 20cm of rain or irrigation is essential in the pre-flowering period (Eze, *et al*, 2011). Generally, large quantities of water, well distributed are needed for high maize yields, maize uses water relatively efficient. Prolonged heat and drought during pollination period often result in desiccation of leaf tissues, pollen grains and poor seed setting.

The grain usually becomes mature four (4) to six (6) weeks after fertilization. A fairly high percentage of maize is harvested in the mature state for human consumption, while the remainder is left until it is dry. According to Akinyosoye (1999) in the more humid parts of West Africa, there are two wet seasons and two crops can be raised in one year (i.e early and late maize). Early maize is grown during the first rainy season (March – July) and late maize is grown during the second short season (August – November). A higher yield is usually obtained from the early maize crop. It is important to note here that with the advent of global warming and climate change, especially in Africa, these schedules may not hold (Eze et al, 2011). Efforts should be geared up towards fresh determination of time of planting for maize because of its sensitivity to this particular factor.

Time of Planting– According to Eze et al (2011), the optimum time of planting for early maize depends on the various ecological zones of Nigeria and was scheduled as shown in Table 1 below:

Table 1: Schedule for Time of Planting for Early Maize in the Various Ecological Zones of Nigeria

Ecological Zones	Time of Planting of early maize
1. Forest zone	Mid March to First Week in the month of April
2. Derived – Savanna	First to third week in April
3. Southern Guinea Savanna	Last week of the month of April to mid month of May
4. Guinea Savanna	Last week in the month of May to first week in the month of June
5. Sudan Savanna	First to second week in the month of June

Source: Eze et al; (2011)

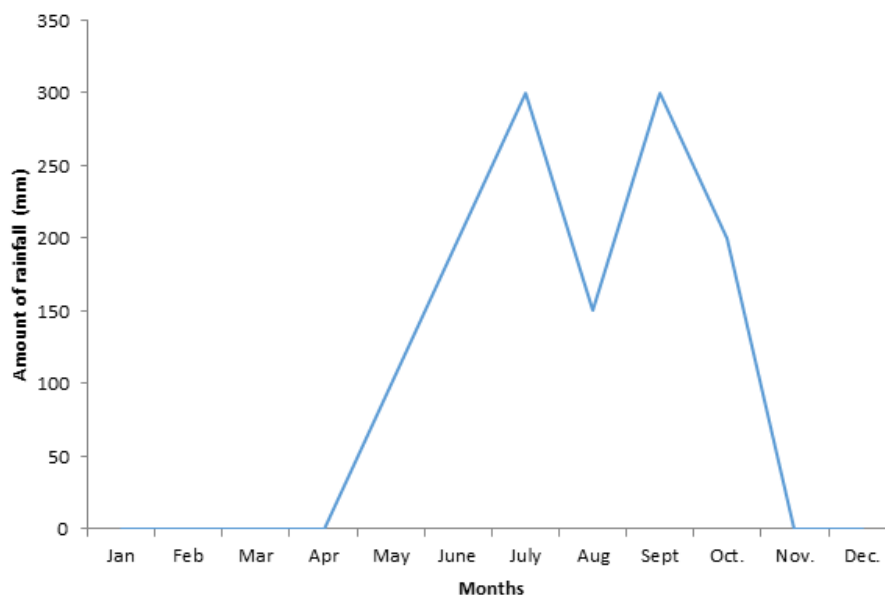
Following the above schedule in Table 1, this study is concerned with the planting time (Mid March to First Week in April) of maize in the forest zone where the study area is located.

Results and Discussion

Time of Commencement of Rainfall (2020)

The month rains started in the year, 2020 was noted and recorded. The results are shown in column 2 of Table 1. Long before now, about 3 – 4 decades ago, available records show that the usual time of commencement of rainfall in the South East Region and where the study Area is located was in the month of April. This is in agreement with the opinion of (Oga, 2014), see Figure 1, which was designed with available records and information in (Oga, 2014). This timing of rainfall encouraged and guided farmers in the planning and execution of their farming activities. With this background information, the result shows that there has been deviation in the time of commencement of rainfall. Nowadays rainfall starts early in the year between the months of January and February contrary to popular opinion, see Figure 1 compared with Figures 2 and 3. This situation corroborates results of the field works of Oga, *et al*; 2012, 2016, 2019 and beyond.

Figure 1: Showing hypothetical usual pattern of rainfall prior to the realities of global warming and climate change



Source: Designed with information in (Oga, 2019)

Frequency of rainfall

The number of times of rainy days in each of the months of the year, 2020 was noted and recorded and the mean determined for each month. The results in Table 1 show that rainfall was experienced early in the year and fell in almost all the months of the year. The result also shows that the rains were not evenly distributed especially in the first four months of the year. From the results, there were much rainfall in the months of June, July and September. The month of September recorded the highest frequency of rainfall.

Duration of rainfall in hours

In each day of rainfall in each of the months for the period covered, duration of rainfall in hours was determined using wrist watches and wall clocks. The monthly mean of this was also determined. The results in column 4 of Table 1 for the period covered show that there was high increase in hours of rainfall in the month of September and this was poor in the month of March. Generally, the result revealed that there were long hours of rainfall, especially between the months of May and October. There were “inverse relationships” between frequency and duration of rainfall in hours for the period covered.

Intensity of rainfall

In each day of rainfall in each of the months for the period covered, intensity of rainfall was determined by observing the moderate or heavy nature of rainfall. The monthly means of these were determined. The results in columns 5 and 6 show the moderate and heavy nature (intensity) respectively of rainfall. Moderate rainfall was experienced more in the month of

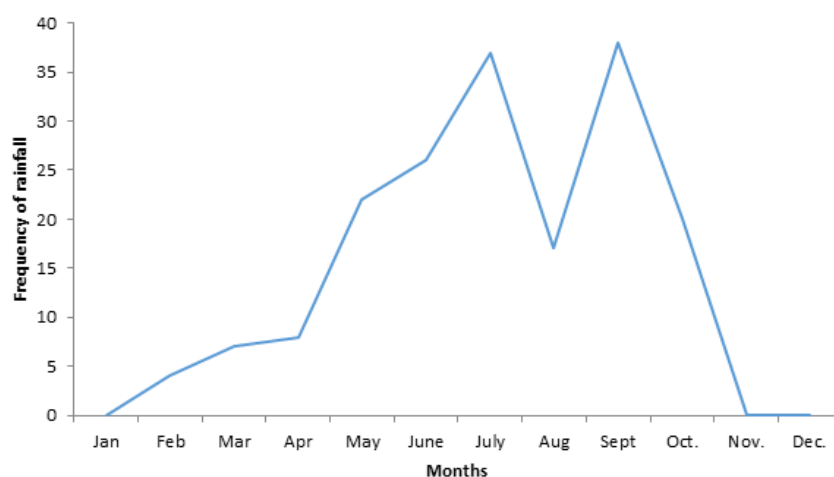
June, July and September and the month of September recorded the highest. Heavy rainfall was more in the months of June, July, August and September and the month of July recorded the highest number of heavy rainfall.

Table 2: Monthly summary of rainfall in terms of Frequency, duration, among others in the year, 2020

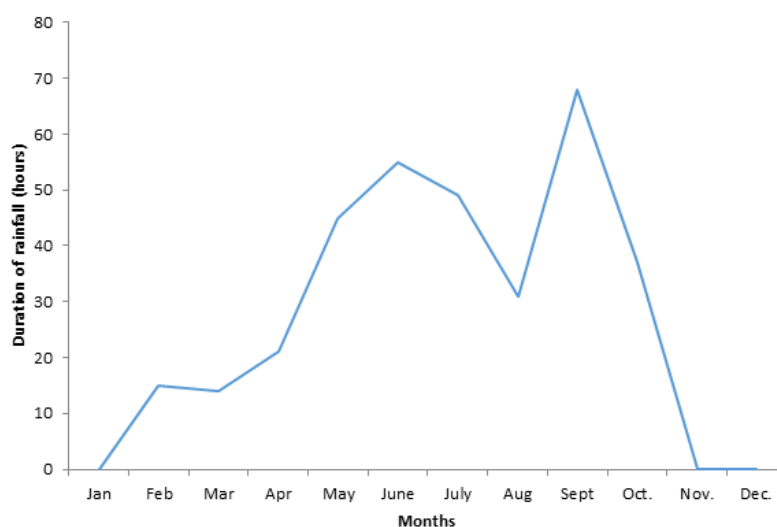
SN	Months of the year	Rainfall		Frequency of rainfall	Duration of rainfall in hours in each month	Intensity	
		Yes	No			Frequency of moderate rainfall in each month	Frequency of heavy rainfall in each month
1.	January		√	-	-	-	-
2.	February	√		4	15	3	1
3.	March	√		7	14	3	4
4.	April	√		8	21	6	2
5.	May	√		22	45	15	7
6.	June	√		26	55	17	9
7.	July	√		37	49	24	13
8.	August	√		17	31	8	9
9.	September	√		38	68	26	12
10.	October	√		20	37	12	8
11.	November		√	-	-	-	-
12.	December		√	-	-	-	-

Source: Field work, 2020

Fig. 2: Pattern of rainfall in the year, 2020



Source: Designed with information from field work, 2020

Fig. 3: Pattern of rainfall in the year, 2020

Source: Designed with information from field work, 2020

Implications for Maize Production in the Study Area

The implications for maize production in the study area take leave from the nature of maize as a crop in association with the role of rainfall as environmental factor affecting crop production. Afikpo North Local Government Area, which is the study area is located in the forest vegetation zone which has the time of planting of maize as shown in Table 1 to be from mid-month of March to first week in the month of April. Information available from literature point to the fact that maize plant thrives when the environmental conditions are favourable and that large quantities of water and well distributed are required for high maize yields. But it is pertinent to point out here that the foregoing information is in contrast to the results obtained from the field work carried out in the study area for the period covered in relation to rainfall pattern and distribution. The implication to this regard is that early maize cultivation may probably commence early in the year due to commencement of rainfall early in year contrary to popular opinion. See Figure 1 compared to Figure 2. The implication again is that if the crop is to be cultivated early in the year due to early rainfall which may not be adequate, its cultivation could be supported with adequate irrigation if high yield is to be expected.

Another implication is that actual maize cultivation may have to be shifted from the month of April to the month of May from when much more rainfall is being experienced and better distributed than in the first four (4) months of the year when rainfall was not much and also not evenly distributed. See Table 2 and Figure 2. Further implication is that farmers in the study area need to be convinced and to be ready to start proper maize cultivation from the month of May rather than in April to enable the maize crop enjoy adequate water supply for about three months i.e. May – July and this will guarantee high yield. This position is supported with the results of the field works carried out by (Oga *et al*, 2012, 2016, 2019 and beyond) in the study area on same weather parameter or element.

Again available information from literature in relation to maize cultivation, show that there is usually “August break” i.e. a trough period during when much rainfall is not usually experienced and this permits the cultivation of late maize from the later part of August to last week in the month of November (3 months). During this period much rainfall is expected to last for about three months to adequately support the growth and proper development of late maize. Although the trough was fairly experienced in the period covered but partly. This situation is in contrast to the result of the field work as shown in Table 2. Rainfall in the period covered, after the “August break”, fell for about two (2) months: September to October and dropped sharply after the month of October, see Figures 2 and 3. The implications to this regard are that late maize may not be cultivated or may suffer due to inadequate rainfall which the crop plant requires to thrive. Farmers may have to provide water to make up for the shortage in water supply or suffer losses of the crop and subsequently hunger, short supply for the market, among other implications. This position is in agreement with Dembele, Akinbile and Aminu (2019) concerning the effects of rainfall on grain production as a result of climate change.

Conclusion

Climate change has caused changes in rainfall pattern and distribution. It has also impacted human's livelihood and this calls for measures to improve on the situation. There is need therefore to provide information and knowledge on weather changes, especially as it concerns rainfall pattern and distribution for guidance on the improvement of the situation. The purpose of the study was to generate data and information on rainfall patterns and accomplish specific objectives. The result shows that there has been deviation from the usual pattern of rainfall and demand improvement measures to help guide farmers in planning their farming activities. Some of the measures are shift in planting date of some crops e.g. maize and embarking on irrigation projects.

Recommendation

1. Creation of more awareness on the realities of climate change
2. Farmers should shift planting dates of some crops as the situation demands
3. Establishment of local weather stations to help farmers with weather information
4. Construction of water channels for irrigation activities to assist in water supply

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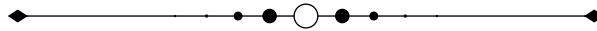
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Youth Empowerment for Security and Human Capital Development: The Role of Counselling

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Abstract

The society is facing a lot of global crises. This crisis ranges from economic, political, social and religious aspect of our lives. This paper examines the youth empowerment for security and nation building: the role of counseling. The concept of National security and the state of insecurity in Nigeria, the concept of nation building, youths empowerment for security and nation building, counseling strategies for security and nation building. It is therefore recommended that; community empowerment efforts to poverty reduction and eradication should be based on common driven development in which the younger ones and also the adults would be involving in the decision making on matters affecting them for a sustainable development.

Keywords: *Security, Human capital, Counselling and Empowerment.*

Background to the Study

Nigeria has witnessed a lot of religious, political and ethnic crisis in the recent times, these crises have graduated into insurgency, terrorism, banditry, cattle rustling etc., which led to the destruction of lives and properties particularly in the northern part of the country, which slowed down the economic activities in that part of the region and the entire country at large. The educational activities in the region have also suffered a serious setback. According to Sababa and Adamu (2016), the main targets of the insurgents are schools and other government institutions. The Islamic insurgents see the acquisition of western education as a taboo or sacrilege. Those who have already acquired it are expected to demonstrate their loyalty to the sect by tearing their academic certificates. The main target of the insurgents (Boko Haram) is to destroy western education and democracy and govern the country under strict Islamic laws (Sharia).

The north-east region of Adamawa, Borno and Yobe States has witnessed horrifying experience whereby schools have been attacked, students massacred and hundreds of female students abducted and married off based on Islamic rites (Olaniyan, 2015). In July 2013, the insurgents set fire to students' dormitories in Yobe State, burning some students alive and shooting others as they tried to flee. In their various attacks between 2013 to date they have burnt over 300 public schools in Borno and Yobe State, killing more than 10,000 students and teachers. Just recently, they abducted more than 600 students in Kankara village in Katsina State leading to the impromptu closure of the schools in the state and that of the neighbouring state like Kaduna, Jigawa, Sokoto, Kebbi and Niger State in December 2020. These have drastically impeded peace and educational development in that region and that of the country at large (Voanews.com, 2021)

Meanwhile, Human capital is the great asset any country can boast of, because no matter the amount of resources invested on programmes in the country, its success or failure depends largely on the quality of manpower that plan and execute the policies and programmes. The Nigerian public sector responsible for good governance is generally admitted by Nigerians as definitely not functioning at high level. There are various lapses according to Alozie (2017) by government agencies which contribute to poor governance and by extension underdevelopment. No nation develops beyond the capacity of its public service and there is a broad consensus amongst Nigerians that our public service is non-functional. According to Kalu (2011), many have argued that Nigeria's problem is traceable to poor human capacity that sufficiently caters for the welfare (good governance) of the citizen, it is only a well-developed manpower that can manage resources properly and regulate both internal and external relations as well as effectively control the nations policy process.

The challenge staring Nigeria in the face as it concerns providing good governance to people largely depends on, but not limited to the capacity of her human capital development and management. It is expected that the focus, application and commitment of highly skilled manpower that can adopt and transparently implement good governance policies, and also can be within the ambit of human capital development and management. Uzoeshi (2005) and Ordu (2012) asserted that counselling is the process of helping a normal individual to

understand himself in forms of his strengths and limitations. These scenarios send a wrong signal that all is not well, hence there is the need for post-traumatic counselling to the people affected by the menace of insecurity for optimum psychological and emotional balance state. The counsellor seeks to guide people towards self-understanding, acquiring skills and knowledge to become useful to themselves and the society at large, counselling will also help the individual to channelled their energy into a more constructive ventures and work towards the political, social and psychological wellbeing of the citizens of the nation. A nation that is not secure cannot develop effectively no matter its highly skilled human capital development; it is against this background that this paper examines the role counselling can play in proffering solution to the security challenges facing the nation today.

Concept of Security and Insecurity

According to Akintunde and Musa (2016), security is perceived as a basic human need that contributes to effective learning. Psychologists proposed that security is crucial for human survival. Following the postulation of if hierarchy of needs by Abraham Maslow, the lower needs of man like food, shelter and security must be met before other higher needs like education, intellectual/cognitive (Akintunde, 2015). Security also involves existence of environmental factors that instill peace of mind in an individual in order to empower him/her to function optimally in the society.

Best (2006) sees insecurity as a degenerated state of conflicts, threats to human security, intense violence characterized by fighting, death injury. To Olamosu (2000), insecurity is a state or condition in the life of a social unit system organization or society in which the existence of a problem assumes critical dimension to the extent that the survival or existence of the social system or structure is threatened. Corruption and poverty have been identified as some of the challenges threatening security in Nigeria.

The deteriorating security situation in Nigeria is worrisome. Recently, Nigeria has witnessed unprecedented level of insecurity ranging from intra-communal, inter-communal and inter-ethnic clashes; religious violence, armed robbery, assassination, kidnapping and “Boko haram” insurgency (Mutiullah cited in Abubakar, 2011). Insecurity in Nigeria is causing developmental challenges such as endemic penury, high rate of unemployment, corruption, low industrial output, unstable and deteriorating exchange rate, high inflation rate, inadequate physical and social infrastructure, large domestic debt and rising external debt profile (Ewetan, 2013). These problems have posed severe threats to socio-economic development in the country, in that it stifles business and economic activities and discourages local and foreign investors (Ewetan and Urhie, 2014). The security of every nation is very important for the survival and growth of its economic, social and political systems. National security can be described as the capability of the state in catering for the defence and protecting of its people (Makinde, 1998). National security entails the nation's effort and strategies its states and its citizen against national crisis through power projections such as military power and economic might. National threats endanger human rights and freedom, liberty to life, movement and the right to free expression (Momoh, 2016). Ali (2013) explains that national security borders on any incidence compromising the welfare and existence of the citizens of a

nation and it is aimed at securing favourable living conditions for every member of the nation. To strengthen the Federal Republic of Nigeria, to advance her interest and objectives, to contain instability, control crime, eliminate corruption, enhance genuine development progress and growth improve the welfare and wellbeing and quality of life of every Nigerian.

Human Capital Development

Human capital refers to the knowledge, skills and competences embodied in the individual as a result of education, training and experience that makes him more productive. Human capital development according to Fagbounbe (2008) in Kalu (2011) has to do with the recruiting, supporting and investing in people, using training, coaching, mentoring, internship, organizational development and human resource management for its eventual realization. Since human capital represents human skills and capabilities generated by investment in education and health improvement of man is therefore paramount. According to the revised guidelines for training in the Federal Service in Nigeria, the extent of staff training and manpower development policy, is to lend a systematic approval to training efforts in the service and by so doing enact government to drive higher benefit from the massive investment in manpower development (Akpocho, 2018).

Youth Empowerment for Security and Human Capital Development

Youth in Nigeria today constitute the largest population, from about 47% of the economic and political active population (Obadipe, 1992). It is expected of them to contribute meaningfully towards development of the nation as they are believed to be invaluable asset, leaders of tomorrow and constitute the major workforce of the nation. Youth empowerment develops competencies in them towards actualization of the growth of the society and creates skills which will not only be for their empowerment but also bring about the much desired industrial and technological development of the nation.

Empowering the youth is also developing the nation's security and human capacity towards nation building. As identified by Miller (2008), to empower the youths is the desire to equip the young individual skillfully and proficiently enough in all chosen trade. Apart from the fact that it will empower the youths with what it takes to excel in the performance of a task, the benefit that is accrued to skilled individuals are numerous including; income generation, ability to become self-reliant and employer of labour. In a deregulated and industry driven economic nation like Nigeria, this heightens the need for the youths to be empowered to enable them contribute in generating a dynamic economy and political advancement. With this kind of economic advancement in mind, it is imperative that the youths will acquire relevant skills/knowledge that will make them attractive to employments of labour that prefer skilled and experienced workers, thereby increasing the production capacity and boosting the economic strength and security of the nation.

Counselling Strategies for Security and Human Capital Development

Counselling form part of the services that offers help to the youths in personal-social aspect of their lives. Denga (1989), defines guidance as giving assistance to individuals to understand who they are as individual, become aware of their personal characteristics (values, abilities,

aptitudes, strength and weakness), understand the world around them and people with whom they interact. From the above definition the relevance of guidance and counselling in every organizational aspect cannot be over emphasized. Counselling on the other hand refers to as a process whereby one person (counsellor) in a person to person or face to face relationship either in group or individual encounter to assist in resolving crisis in educational, vocational and personal-social aspect of their lives.

1. **Group Counselling:** Uzoeshi (2005), Defined group counseling as the situation where individuals are grouped under some variables, which include age, sex, level of maturity, and job interest among others. This is to enable the counsellor meet the specific needs of each of the group members in chosen the type of occupation that suit them. To meet the specific needs of the members, the counsellor is expected to provide useful data on jobs and the challenges involved in the job that can enhance the participation of the youths in the nation security and self-development.
2. **Individual Counselling:** Counsellors should make it as a duty to make themselves available and friendly with the youths. The counsellor should show empathic understanding and unconditional positive regard irrespective of their overt and covert behaviours. This will encourage them to participate actively in a more meaningful aspect of their development (Ordu, 2012).
3. **Mass Media:** Through the mass media, counsellors can disseminate information about youth empowerment programmes. Radios and television can be used to transmit this information in order to ensure such information get down to the grassroots for the benefit of both educated and uneducated youths; news bulletin can be erected at strategic points with newspaper cutting and clips from websites on empowerment and development for the youths.
4. **Public Lectures, Seminars and Symposiums:** The youth can be empowered through public lectures and seminars. The counsellors from time to time should as a matter of importance organise public lectures and seminar for the teaming youth with the intent of providing current information on career opportunities.
5. **Creation of Vocational Guidance Centre** where self-employment and entrepreneur skills can be inculcated to the youths. The centre should employ the services of professional counsellor for effective decision to those youths in schools and those dropouts from schools.
6. **Establishment of Counselling Centre in Schools:** These will enable us catch them young. Counselling is the best form of teaching that involved a jointly determined effort to help the client to evolve a new set of appreciable behaviour of attitudes (Skinner, 1970).
7. Enhancement of guidance counsellors capacity for global partnership development through the provision of modern information and communication technology gadgets in existing counselling centres and offices throughout the nation.

Conclusion

Helping the youths to become more productive, progressive and successful in life which may lead to greater responsibilities for lifetime. Human beings whether children, youths, adults or aged develop and interact with their environment, within the interaction processes some

factors in the environment poses challenges, some of these challenges can be solve on their own, while other demand holistic approach. Therefore, it is cleared that for security and human capital development to build up, the young and the adults need to be empowered financially, vocationally and technologically in order to live a peaceful and crime free life.

Suggestions

From the foregoing, the following suggestions are necessary for successful security and human capital development.

1. Community empowerment efforts leading to poverty reduction and eradication should be based on community driven development in which the younger ones and also the adults would be involve in the decision making on matters affecting them for a sustainable development.
2. In the implementation of Sustainable Development Goals (SDGs), emphasis should be given to the youth empowerment programmes and functional vocational, technical education in schools.
3. Government needs to intensify on productivity and self-reliant programmes such as National Directorate of Employment (NDE) where the youths will be creative and develop entrepreneur skills which may reduce unemployment.
4. Adequate funding in all development centres like schools, counselling centres, industries and different youth centres by the government and well to do persons in the society.
5. Parents and guardians should support, assist and encourage their wards in whatever occupation they choose.

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Assessment of the Implementation of Integrated Qur'anic Education in Niger State (2004 - 2019) Towards Addressing Nigeria's Development Challenges in the 21st Century

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Abstract

The study on assessment of the implementation of integrated qur'anic education in Niger state (2004 - 2019) towards addressing Nigeria's development challenges in the 21st century was conducted to examine the level of implementation of Integrated Qur'anic Education programme and to identify the challenges facing the implementation of Integrated Qur'anic Education programme in Niger State (2004 - 2019). Two research questions guided the study. Survey design was adopted for the study. Questionnaire tagged Implementation of Integrated Qur'anic Education Questionnaire (IIQEQ) was used as a tool for collection of data. A total of 150 respondents formed the population of the study using simple random sampling technique, comprising 30 pupils, 30 teachers, 30 proprietors, 30 parents and 30 Ministry of Education (MOE) officials. The data collected was analyzed using frequencies and percentage for the demographic variables. The research questions were statistically analyzed using mean and standard deviation and valid judgments was made. Findings of the study revealed that; funding of the programme is inadequate, the learners (pupils) are not well fed on daily basis, the food given is not enough for them, it is not highly nutritive, supply and preparation of food to the learners is not regular, prompt and hygienic, infrastructural faculties like; medicines, uniforms, instructional materials for teaching Information and Communication Technology (ICT) among others which had influenced the successful implementation of the programme. Recommendations were made on the way forward towards the sustenance and success of IQE programme in Niger State and even beyond for Nigeria's development in the 21st century and beyond.

Keywords: *Integrated Qur'anic Education, Implementation, Tsangaya Education, State Universal Basic Education Board*

Background to the Study

There is no doubt that education is instrumental to the overall development of the individual and the society. It is for this reason that various levels of government in Nigeria have continued to invest heavily in the education industry (Imam and Muhammad, 2012). Therefore, there is the need for the industry to justify this immense investment. That is the reason for contemporary world today to focus attention on education as an instrument of launching nations into the world of science and technology. This is a hope of human capital advancement, in terms of living conditions and development of the environment (Hanushek, 2003). The concept of integration of Qur'ān education system and western education must be on Islamic concept. This concept relies on education which is defined as process of human development physically, mentally, socially and technologically to enable human being function effectively in any environment in which he may find himself (Federal Republic of Nigeria, 2013).

The Almajiri happens to be one of the persons covered by Act 15, which defines Universal Basic Education as "early childhood care and education, the nine years of formal schooling, adult literacy and non-formal education, skills acquisition programme and the education of special groups such as nomads and migrants, girl-child and women, Almajiri, street children and disabled groups" for the purpose of provision of basic education. Hence, in view of the importance of developing a comprehensive system of education that will cater for all Nigerian children of school age, the integration of Qur'ānic schools into the UBE programme becomes imperative towards the attainment of EFA and SDG goals (Universal Basic Education Commission, 2010).

The Nigeria nation building will do so well by integrating Qur'ānic education into UBE policy especially for the Nigerian Muslim populace. In this regard, Qur'ānic education is one of the education genres through which Islamic world builds her faith and devotion towards Allāh. Qur'ānic education is a conscious and well-planned effort to prepare the learners to recognize, understand, appreciate, and believe in the Islamic teachings (Paiko, 2010).

In the recent, it is understood that western education is also important due to social and cultural behavioural relationship with non-Muslims. In 1996, there was collaboration between Niger State Agency for mass education and United Nations Children Education Fund (UNICEF) "C" field office Kaduna on base line data survey conducted in 1997, 2 IQE centres were established in each of the 25 local government areas in Niger state. In 2007 UBE in collaboration with NSUBEB conducted a comprehensive baseline data survey in the 25 LGAs of the state for (IQE) Tsangaya schools where 4,452 centres were identified, with 312,679 learners and 12,190 teachers out of which 10 pilot schools were selected across the state. A committee of ten spread across the state deploying NCE teachers to these centres for integration programme (NSUBEB, 2015).

In 2009, His Excellency (Dr. Mu'azu Babangida Aliyu) the then Governor of Niger state inaugurated state Islamiyya Qur'ānic and Tsangaya Education (IQTE) implementation committee headed by the Emir of Suleja (Alhaji Mohammad Awwal Ibrahim) who undertook

another baseline data survey which identified 8,870 Qur'ānic centres from the 8 emirates councils of the 25 LGAs with 17,892 mallams having 689,736 learners in these centres (NSUBEB, 2017).

The Universal Integrated Qur'ānic Basic Education (UIQBE) bill in Niger state was signed into law by the governor on July 23rd 2014 (SUBEB, 2014). Gradually *Almajiri* schools where the proprietors accepted integration with western education officially took off on 10th March, 2015 in Niger state. The State Strategic Implementation of Qur'ānic Education Committee (SSIEC) headed by First Class Emir of Suleja Mallam Muḥammad Awwal Ibrahim randomly selected 11 Integrated Qur'ānic Education (IQE) schools which are: Pangamu in Suleja LGA, Kwanayi in Paiko LGA, Tunga in Minna Chanchaga LGA, Alagbado in Minna Chanchaga LGA, 123 Quarters in Minna Chanchaga LGA, Zarumai Quarters in Minna Chanchaga LGA, Aliyu Yarima in Bida LGA, Tanbihul Islam in Mokwa LGA, Model IQE in Kontagora LGA, Darul Qur'ān in Gulbinboka Mariga LGA and Kpakungu in Minna Chanchaga LGA (NSUBEB, 2015).

Integrated Qur'ānic Education (IQE)

The integrated education is an approach of learning in which several aspects of integrated inter-subject matters are intentionally correlated. With this method, the students will gain knowledge and skills as a whole so that the learning becomes more meaningful to the students, meaning that the students indirectly learn and understand the concepts they are learning through (Fowoyo, 2013).

Integrated Qur'ānic education involves teaching literacy to Qur'ānic school learners at the period agreed upon between the proprietor and the facilitator. There is no interference in the running of Qur'ānic education programme. The two forms of education are expected to be provided hand in hand in the same school. According to Dukku (2006), integration of Qur'ānic education in this respect refers to the strengthening of exciting Qur'ānic and Islamiyya schools to achieve their goals and accommodate the introduction of basic education elements of literacy, numeracy, life and vocational skills subjects into their curriculum.

He further gave the following goals that such integration should aim at achieving: -

- a. the enhancement of the existential condition of the *alamjiris* child and his Mallams for better performance;
- b. the improvement of the teaching-learning environment in the Qur'ānic schools and strengthens their capacity to deliver;
- c. the expansion of the curriculum of Qur'ānic and Islamiyya schools to accommodate modern subjects of literacy, numeracy, life and vocational skill;
- d. the provision of access to Basic education for Qur'ānic and Islamiyya school pupils in the spirit of the UBE and EFA/MDGSs; and
- e. the production of citizens who are grounded in the Islamic knowledge and values as well as modern educational skills for the spiritual and material development of the individual and the nation (Dukku 2006).

Statement of the Problem

Educational programme implementation is the stage where the preparation made earlier, the plans, designs and analysis proposed are tested to see how real they are (Egonwan in Saidu, 2021). The above definition suggests that it is mainly action to translate the proceeding thought process into concrete reality. The activities directed towards putting a programme into effect. It is also the process of carrying out an objective of a plan. A well formulated policy or programme is useless if not properly implemented as its stated objectives will not be realized. As in many other developing countries, implementation is the bane of public policies and programmes in Nigeria.

Despite the laudability of the integrated Qur'anic school programme in Niger state, it is becoming glaring that the implementation of the programme has to some extent become virtually ineffective. Considering the challenges of lack of fund, infrastructure, qualified resource persons etc. These problems have indeed bedevilled the programme in Niger state due to lack of availability and transparency on the part of the policy makers and those charged with the mandate to ensure the proper implementation of the programme in Niger state. This is what prompted the study on assessment of the implementation of integrated qur'anic education in Niger state (2004 - 2019) towards addressing Nigeria's development challenges in the 21st century.

Objectives of the Study

The study was conducted to assess the implementation of integrated qur'anic education in Niger state (2004 - 2019) towards addressing Nigeria's development challenges in the 21st century. The specific objectives are to:

1. Investigate the role of feeding the learners (pupils) for the effective implementation of Integrated Qur'anic Education programme in Niger State from 2004 – 2019 towards addressing Nigeria's development challenges in the 21st century.
2. Assess the provision of infrastructure towards the implementation of Integrated Qur'anic Education programme in Niger State from 2004 – 2019 towards addressing Nigeria's development challenges in the 21st century.

Research Questions

The following questions guided the study:

1. Are the learners (pupils) of the Integrated Qur'anic Education in Niger State well fed from 2004 – 2019 towards addressing Nigeria's development challenges in the 21st century?
2. Are infrastructural facilities adequately provided for the implementation of Integrated Qur'anic Education programme in Niger State from 2004 – 2019 towards addressing Nigeria's development challenges in the 21st century?

Methodology

The study adopted descriptive survey design. The population of this study comprised of pupils, teachers, proprietors, community (rulers/parents), and Ministry of Education (MOE) officials. Based on comprehensive baseline survey conducted by Niger state IQE

implementation committee in collaboration with SUBEB in 2009 in the 25 LGAs of Niger State for IQE schools, there were 8,870 Qur'ānic centers with same number of proprietors, 698,736 learners (pupils), 17,892 teachers. There is no documented data by SUBEB of the parents. The sample size was drawn from the population using simple random sampling technique.

The instrument for data collection was a self-structured questionnaire tagged Assessment of Implementation and Impact of Integrated Qur'ānic Education Questionnaire (AIIIQEQ). Likert rating scale of Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (D), and Strongly Disagree (SD) was used to rate respondent's opinion of each item of the questionnaire. The data collected were statistically analysed using mean and standard deviation and valid judgments was made. A mean threshold of 2.5 was set as acceptance or rejection level for the item statements.

Data Analysis and Result

Research Question 1: Are the learners (pupils) of the Integrated Qur'ānic Education in Niger State well fed from 2004 – 2019 towards addressing Nigeria's development challenges in the 21st century?

Table 1: Analysis of respondents on whether the learners (pupils) of the Integrated Qur'ānic Education in Niger State well fed from 2004 – 2019 towards addressing Nigeria's development challenges in the 21st century

ITEM STATEMENT	RESPONSE CATEGORY					Mean	SD
	Strongly Agree F (%)	Agree F (%)	Undecided F (%)	Disagree F (%)	Strongly Disagree F (%)		
The learners (pupils) are well fed on daily basis towards the implementation of IQE programme in Niger State.	84(38.2)	103(46.8)	15(6.8)	15(6.8)	8(3.6)	2.78	1.097
The food given to the learners (pupils) is enough for them towards the implementation of the programme in Niger State.	86(39.0)	94(42.7)	12(5.5)	17(7.7)	11(5)	2.80	1.207
The food given to the learners is highly nutritive towards the implementation of the IQE programme in Niger State.	82(37.2)	99(45)	10(4.5)	16(7.3)	13(5.9)	2.90	1.336
The supply and preparation of food to the learners towards the implementation of IQE programme in Niger State is regular and prompt.	85 (38.6)	50 (46.2)	3 (6.8)	7 (6.8)	5 (3.6)	2.73	1.467
Food given to the learners towards the implementation of IQE programme in Niger State is prepared in a hygienic way.	86(39.0)	60 (42.7)	1 (5.5)	1 (7.7)	2 (5)	2.63	1.353

Table 1 showed the opinion of respondents on whether the learners (pupils) of the Integrated Qur'ānic Education in Niger State are well fed from 2004 – 2019. From the responses, over 95% of the respondents with average mean of 2.68 agreed that the learners (pupils) are not well fed on daily basis, the food given to the learners (pupils) is enough for them, the food given to the learners is not highly nutritive, supply and preparation of food to the learners towards the implementation of IQE programme in Niger State is not regular, prompt and hygienic towards the implementation of IQE programme in Niger State. This had influenced the implementation of the IQE programme in Niger State from 2004 – 2019 towards addressing Nigeria's development challenges in the 21st century.

Research Question 2: Are infrastructural facilities adequately provided for the implementation of Integrated Qur'ānic Education programme in Niger State from 2004 – 2019 towards addressing Nigeria's development challenges in the 21st century?

Table 2: Analysis of respondents on whether infrastructural facilities adequately provided for the implementation of Integrated Qur'ānic Education programme in Niger State from 2004 – 2019 towards addressing Nigeria's development challenges in the 21st century

ITEM STATEMENT	RESPONSE CATEGORY					Mean	SD
	Strongly Agree F (%)	Agree F (%)	Undecided F (%)	Disagree F (%)	Strongly Disagree F (%)		
Medical facilities are provided to schools towards the implementation of IQE programme in Niger State.	84(38.2)	105(47.7)	10(4.5)	17(7.7)	4(1.8)	2.78	1.097
Uniforms and instructional materials are adequately provided to IQE schools towards the implementation of the programme in Niger State.	76(34.5)	104(47.3)	12(5.5)	17(7.7)	11(5)	2.80	1.207
Assessable water is adequately provided for schools towards the implementation of IQE programme in Niger State.	80(37.2)	99(45)	12(4.5)	16(7.3)	13(5.9)	2.90	1.336
ICT facilities towards the implementation IQE programme in Niger State.	86(39.0)	94(42.7)	12(5.5)	17(7.7)	11(5)	2.80	1.207
Sporting facilities towards the implementation IQE programme in Niger State.	82(37.2)	99(45)	10(4.5)	16(7.3)	13(5.9)	2.90	1.336

Table 2 showed the opinion of respondents on whether infrastructural facilities are adequately provided for the implementation of Integrated Qur'ānic Education programme in Niger State from 2004 – 2019. From the responses, over 95.9% with average mean of 2.78 agreed that,

provision infrastructural facilities are grossly inadequate towards the successful implementation of IQE programme in Niger State. Inadequacy of the provision of ICT and sporting facilities, medical facilities, uniforms and instructional materials had influenced the implementation IQE programme in Niger State from 2004 – 2019 towards addressing Nigeria's development challenges in the 21st century.

Discussion of Findings

The study found that, the learners (pupils) of the Integrated Qur'ānic Education in Niger State well fed and that infrastructural facilities are grossly inadequate towards the implementation IQE programme in Niger State from 2004 – 2019 towards addressing Nigeria's development challenges in the 21st century. This concurs with Sangweni (2003) who affirms that, nutrition and health have powerful influences on a child's learning performance in school. Children who lack certain nutrients in their diet (particularly iron and iodine) or who suffer from protein-energy malnutrition, hunger, parasitic infections or other diseases, are likely not to have the same potential for learning as healthy and well-nourished children do. This is because learners who are hungry have more difficulty in concentrating and performing complex tasks, even if otherwise well nourished.

Equally, the finding of the study revealed that infrastructural facilities was not adequately provided towards effective implementation of IQE programme in Niger state from 2004 – 2019. This is line with findings of Adesina in Saidu (2021) that the quality of education that our children receive has direct relevance to the availability or lack of physical facilities and overall atmosphere in which learning takes place.

Conclusion

The Integrated Qur'ānic Education (IQE) programme is a formal school curriculum expected to run alongside with the existing Qur'ānic study programme. That is Qur'ānic education will continue to operate as it is now without interference. The Mallams will continue to run their Qur'ānic education programmes as usual. The curriculum is expected to be in operation at weekends, which comprise of Thursdays and Fridays when the Amajiris are free. However, the learners must be well fed as nutrition and health have powerful influences on a child's learning performance in school. Hitherto, infrastructural facilities like oshtel block for pupils, hand-pump borehole and an electric power generator, VIP toilets, recitation hall for learning Qur'ān, language laboratory for Arabic lessons among others enhances the effective implementation of IQE programme in Niger state and the nation at large

Recommendations

Based on the findings of the study, the following recommendations were made:

1. The UBEC in conjunction with the Niger SUBEB should ensure the learners in the IQE schools are well fed as enshrined in the operational guidelines for the implementation of almajiri education programme towards addressing Nigeria's development challenges in the 21st century.
2. The UBEC in conjunction with the Niger SUBEB should ensure adequate provision of infrastructural facilities the effective implementation of the IQE programme towards addressing Nigeria's development challenges in the 21st century.

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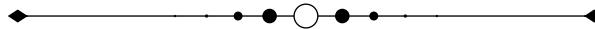
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Functional Secondary Education in Nigeria Panacea for Effective Poverty Alleviation

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Abstract

Education is one of the crucial components of human development and change for sustainable development. It is through education that the individual is able to become productive citizen and acquire the knowledge and skills needed to adapt to an ever changing political, social, and economic environment. One of the developmental problems in Nigeria is the increasing rate of poverty in the country, despite various policies and strategies of government and other stakeholders in alleviating poverty problems the rate continues to increase rapidly. The objective of this paper is to examine functional secondary education as a force that can reduce poverty, create job opportunities and raise income rates of any citizen therefore; the success of any nation in major development problem such as poverty alleviation, unemployment, inequality, among others can be traced on their effective functional secondary education. The paper discussed concept and issues in education, concept of functional education, poverty alleviating through functional education, infrastructural support for functional secondary education, financial support, and inspectoral support. The paper posits that effective and functional secondary education in Nigeria remains the most fundamental vehicle for the eradication of poverty. The paper therefore recommends among others a serious overhauling of the educational system and sector in the country to produce a total person with requisite skills, knowledge and value relevant to Nigeria society.

Keywords: *Functional Education, Poverty Alleviation, Sustainable Development and Entrepreneurial Skill, Secondary Education*

Introduction

Education is accepted as a process of transmitting the cultural heritage, stabilizing the present and improving or changing the future, all over the globe. As asserted by the National Policy on Education (2004), education is an instrument par excellence for effective national development. According to Abubakar (2009), education is a key to success and development of an individual, family, community and society at large. For any country to have a sustainable development, the government of that nation must invest on education of her people. Aggorwal (2008), also points to the fact that education is the direct means by which people seek to share its own destiny and transform it from what it knows itself to be into what it would hope to become. In the modern world today, living without education seems difficult because specific skills are often needed to work and education remains the only means to acquire such skills. Therefore, for any nation to utilize their environment properly, they have to invest on science and technology education. God has endowed every environment with huge and specific amount of resources which differs from locality to locality, state to state, country to country and continent to continent. The natural resources of the environment have to be properly utilized to better the lives of the people. Without a sound knowledge of how to convert those resources to improve the society, Nigeria cannot move ahead to face the challenges of the world. Science and technology education is one of the necessary keys to unlock the opportunities created by these natural resources. It is in the light of the above, the write up determine how to achieve functional secondary education, in order to create job opportunities, raise incomes and make secondary education more effective by placing high premium on technical, vocational, and citizenship education because it is the force that can reduce poverty and raise incomes.

Concept of Secondary Education

Secondary education or post-primary education covers two phases on the international standard classification of education scale. Level 2 or lower secondary education (junior secondary education) is considered the second and final phase of basic education, and level 3 (upper) secondary education or senior secondary education is the stage before tertiary education. every country aims to provide basic education, but the systems and terminology remain unique to them. Secondary education typically takes place after six years of primary education and is followed by higher education, vocational education or employment. In most countries secondary education is compulsory, at least until the age of 16. Children typically enter the lower secondary phase around age 12. Compulsory education sometimes extends to age 19. Since 1989, education has been seen as a basic human right for a child; Article 28, of the Convention on the Rights of the Child states that primary education should be free and compulsory while different forms of secondary education, including general and vocational education, should be available and accessible to every child.

In classical and medieval times, secondary education was provided by the church for the sons of nobility and to boys preparing for universities and the priesthood. As trade required navigational and scientific skills, the church reluctantly expanded the curriculum and widened the intake. With the reformation the state wrestled the control of learning from the church, and with Comenius and John Locke education changed from being repetition of Latin text to

building up knowledge in the child. Education was for the few, up to the middle of the 19th Century, secondary schools were organized to satisfy the needs of different social classes with the laboring classes getting 4 years, the merchant class 5 years, and the elite getting 7 years. The rights to a secondary education were codified after 1945, and some countries are moving to mandatory and free secondary education for all youth under 19 (Deighton, 2000).

Of all the levels of education in Nigeria, secondary education occupies a unique place. Its dual role gives it a prominent position in the system of education. First, secondary education consumes the products of the primary school system. Also, the various higher educational institutions depend on secondary education for their entrants. Thus, with its consumer and producer status, secondary education not only determines the fate, but also dictates the pace of education of the primary and tertiary levels. If Nigeria is to forge ahead economically, socially and politically, then secondary education must be taken out of its present morass, and it must be made more functional for the economic and social reconstruction in Nigeria (Adaralegbe, 2013).

Concepts of Functional Education

Functional education is the total process of bringing up individuals to develop their potentials to the fullest and consequently be able to contribute maximally to the development of the society. Arogundade (2011) adds that functional education seeks to prepare people, especially youth, to be responsible, enterprising individuals who become entrepreneurs or entrepreneurial thinkers who will contribute to economic development and sustainable communities. The need for functional education started emerging in the mid-1980s. In the mid-80s, the Nigerian economy collapsed while youth and graduate unemployment hit the roof. There was large scale layoff of workers and retirement as a result of structural adjustment programmes and bad economic trends in the country. During this situation, functional education, which would have salvaged the situation, was not encouraged. He further observed that tertiary education has not properly included the philosophy of self-reliance such as creating a new productive cultural environment that will promote pride in primitive works and self-discipline, encouraging people to actively and freely take decision affecting their general welfare, promoting new set of attitudes and culture for the attainment of future challenges.

In many European countries, universities and technical colleges train students of science, economics and business management in skills that help to build more sustainable societies, (Arogundade, 2011) he further stated programmes such as peace education, human right education, environmental education, and youth entrepreneur schemes are carried out in many schools. Hence, such initiatives help students and teachers to gain an understanding of inter-linkages needed for sustainable development. The emphasis has been on education that will provide life and occupational skills that will enhance the potentials of individuals reinforcing self-sufficiency and improving quality of life.

Functional education is the education in which the ability to perform productive tasks is more emphasized than education that aim at producing ideological conformity. It is a kind of education that emphasizes practice more than theory Cookey (2003). He went further to say

that Nigerian education has not been functional because too much emphasis has been placed on theoretical and academic knowledge. There is undue emphasis on the possession of certificates instead of on what one can do. According to Minzer (2015), the education processes are geared primarily to prepare students for examination. Through this process of education, the students acquire knowledge and facts without understanding and without saleable skills, the result of this dysfunctional education is that schools turn out graduates without useful knowledge and skills and who becomes alienated from their own environment. Functional education is a leveler of opportunities. The case in Nigeria where majority of graduates of the educational institutions search for white-collar jobs that are very scarce and difficult to secure will be a thing of the past if Nigeria operates a functional curriculum.

Functional education will produce graduates who are entrepreneurs and self-dependent and ready to practice what they have learned in the school. These entrepreneurs will also become employers of labour. More jobs will be created and income will be generated. The end result is that many will be lifted from their problems of unemployment and poverty. Functional education will lead to reduction or elimination of other developmental challenges and social ills presently experienced in the country. Thus, vices like corruption, insecurity, poor governance, ethno-religious crisis and even illiteracy among others could be attributed to high rate of unemployment and poverty in the country. According to Minzer (2015), for functional education to be functional, it should be relevant to the needs of the nation of society and should not only train high level man power but contribute to all development of the nation. Functional education promotes the welfare of its citizenry, advances science and technology and economic growth, enhance democracy. Education is a pivot on which other factors are resolved.

Concept of Poverty

Poverty can be defined as a point in an individual's life where he experiences a lack of basic essential needs in his life. It is the state of experiencing lack and want, it is the process of having little or not enough aid and sustenance for one's self and family members. Poverty is the stage at which you get to and it seems like there is no other way to go, it is the feeling of helplessness and the point where an individual has nothing else to do and starts to think of negative things to do to himself or his family. Poverty is a self-destructive disease that eats into the mind of an individual and turns him or her inside out to reveal how naked they are inside. Poverty is the only thing that can drive an individual to the point of no return and it is not only in the economy of Nigeria, it is also in the lives of so many citizens of Nigeria. It is not when you waste things, it is when you do not have enough to eat or drink, not to talk if waste. Poverty is the only lifeline an individual does not want to experience because it is not a lifeline at all. There are so many definitions and ideology if poverty really is, and if one is not careful, poverty can lead an individual into doing the things he would not normally do if he was in the right frame of mind. Thousands of people in Nigeria have lost their loved ones through poverty, and thousands more are still dying every day due to poverty. It is very different from a hunger strike, it is not a deliberate act not to eat anything because you do not have anything to eat in the first place. (Information Nigeria, 2013).

Poverty has been defined by different authors from different perspectives. These definitions cover the absolute and relative dimensions of poverty. In a simple term, poverty is a condition in which individuals and households cannot meet or satisfy the basic necessities of life i.e. food, clothing and shelter and other basic social services and privileges that will make them to live a decent and fulfilled life. Okoh (2008) defines poverty as “a state of deprivation in terms of both economic and social indicators, such as income, education, health care, and access to food, social status, and self-esteem and self-actualization, Poverty is a pronounced deprivation in wellbeing, and comprises of many dimensions. It includes low incomes and inability to acquire the basic goods and services necessary for survival with dignity. It also encompasses low levels of health and education, poor access to clean water, and sanitation, inadequate physical security, lack of voice, and insufficient capacity and opportunity to better one's life (World Bank). Poverty is a denial of choices and opportunities, a violation of human dignity. It means lack of basic capacity to participate effectively in society. It means not having enough to feed and clothe a family; not having a school or clinic to go to; not having the land on which to grow one's food or a job to earn one's living; not having access to credit. It means insecurity, powerlessness and exclusion of individuals, households and communities. It means susceptibility to violence, and it often implied living in marginal or fragile environments, without access to clean water and sanitation (United Nation, 2009).

From the above definitions, poverty is no doubt synonymous to underdevelopment. Thus, development implies the eradication of poverty. The definition of development by Seer and adopted in this paper gives credence to the above assertion. Development cannot be achieved without eradicating poverty due to the fact that poverty is a major attribute of underdevelopment especially in developing countries. Poverty implies economic, social, political and cultural deprivations. Therefore, developmental goals should be geared toward improving the economic, social, political and cultural needs and aspirations of the people. But the question is, is Nigeria a developed nation based on the above criteria? The answer is obviously “no”. There is therefore the need for capacity building through a qualitative and effective education.

History of Poverty in Nigeria

Nigeria is said to have one of the highest growth rates when it comes to its economy, however, poverty is a known order of the day in the country and it is rated at about 33.3%. Nigeria is a developing and commercial country, that has a lot of natural resources that are enough to sustain the lives of the citizens in the country try, however, this resources seems to not be shared appropriately throughout the country try, and while some people take more than what they should not, some others have nothing entirely to take. The rate at which poverty has struck the country Nigeria, it is very unexpected and confusing because a country with so many minerals and resources, should not have a backward economy or have a big number of poverty-stricken people in it.

Poverty in Nigeria started with the emergence of corruption in the masses and corruption in the government. Where there is corruption, there is usually no headway, and Nigeria is not making headway as long as its economy is concerned. Nigerians have a mentality that if I

cannot get it, then no one should get it, and aside from that, some other people in Nigeria believe that a certain set of people do not deserve some things, so it is best to keep it to themselves. Not judging anyone, or putting anyone to shame, poverty in Nigeria is the fault of everyone and no one is innocent of this. People want to fend for their families but soon enough they become very greedy about it. Others want to find something doing but cannot because corruption has eaten deep into the country and therefore made way for poverty in the lives of so many. Nigeria is one country that experiences mass poverty and the leaders and even the masses who put the leaders in their seats are doing nothing about it. The first issue to be addressed is corruption, and if corruption is wiped out from the government, then poverty will start to decrease.

Nigeria owns a large capacity of leaders who have come and gone and have made no change in the economy when it comes to poverty. Poverty dates back to when a man would rather see his neighbor starve than share his pot of soup or water. Poverty started in Nigeria when the people began to have a notion of “if not for me, then for no one else”. It began to eat deep into the economy when everyone decided to be greedy in the face of power. It cannot be duly noted on paper the date in which poverty started in Nigeria, but it is good you know that Nigeria was also experiencing poverty with the colonial masters here, so it is as good as saying that there is no specific time when poverty started in Nigeria. (Onuba, 2012).

Causes of Poverty in Nigeria

- 1. Low Economic Growth Performance:** An essential factor that works towards alleviating poverty and reducing the rate of unemployment in any country, is a strong and viable economy. The performance rate, as well as the growth rate of the Nigerian economy, is disappointingly low and the country owes a large percentage of its poverty level to this very reason. The country experiences an inadequacy in the area of employment generation for the teeming manpower. A diversified economy, rather than the one which currently relies heavily on oil, would go a long way in helping this situation.
- 2. Violence and Criminal Activities:** Poverty in the country can be directly linked to the high level of violence and unrest due to insurgency within the country. One only needs to look at the internally displaced population that has now become a part of the poverty-stricken populace. Unrest has been seen in the country, leads to migration, a phenomenon that is faced with the heavy problem of resettlement and integration. The level of security to combat this insurgency is nothing to write home about and should be beefed up if this is to be combated.
- 3. The Phenomenon of Weak Governance:** Corruption is the poster child of Nigeria's problems and stands front and center when those issues are being called forth. Programs that have been set aside for poverty alleviation are both poorly implemented as well as poorly monitored. In the area of revenue allocation, funds are most often, diverted to private pockets and to other endeavors for which they were not initially set aside for, and usually, either no one or the wrong people end up being held accountable for these lapses. Badly allocated resources, as well as inadequacy in the aspect of infrastructure due to bad governance, are all part of the causes of poverty in Nigeria.

- 4. Health Problems and Diseases:** When one looks at poverty besides bad health and diseases, one is faced with a “chicken and the egg” conundrum. Which comes first? But then again, is that really the question one should be asking? Entrepreneurial activities, as well as productivity, are two aspects that are greatly hampered by poor health meaning, while ill health can be a result of poverty, that same ill health can be a cause of poverty. A phenomenon such as poverty, especially at the scale experienced in Nigeria is not without its effects which are widespread and intricately connected (Okoh, 2008).

Effects of Poverty in Nigeria

- 1. Education:** It has been statistically shown that children from low-income families are far less likely to perform well in school. Without properly educated youths to take up posts of authority both in the workplace and in the ruling offices of the nation, there can really be no hope for progress. Those children end up as poor as their parents were in most cases, and the cycle continues.
- 2. Development of Children:** It has been shown that children who grow up in poverty, have a higher probability of picking up activities that do them more harm than good health-wise. They have also been shown to be more susceptible to mental illnesses and record terrible cognitive development as opposed to their counterparts from average to rich backgrounds. These children are usually unable to socialize properly and may feel less than capable of handling the available education opportunities that may be open to them. This all works towards negatively affecting their employment prospects in the nearest future.
- 3. Crime:** Owing to the large rate of poverty in Nigeria, there has been an increase in the number of illegal activities in the country as well. The phenomenon of online fraud most popularly described as “419” or “yahoo yahoo” has seen an astronomical spike in recent years. Youths, frustrated by the lack of jobs despite attaining the necessary degrees required for the attainment of those jobs, take to criminal activities to make ends meet. Armed robberies, kidnappings, ritual killings, are only but a few of these criminal activities that have stemmed directly from poverty (Information Nigeria, 2013).

Ways of Alleviating Poverty in Nigeria

There are so many ways to end poverty in Nigeria. The following are recognized ways by Asaju (2012)

- 1 Functional Education:** An educated child has a promising future, and not only a promising future, but an educated child can also bring something to the table of the economy of Nigeria. In so many foreign countries, people have a way of making the youths go forward and do exploit, invent things and break records, this will no doubt set the record of the economy of the country straight and a lot of people will benefit from this initiative. Education in a child helps to broaden the mentality of such a child and makes the child be a free thinker in most cases. Education will help you to open your mind to different opinions and settle for the best.

- 2 **Acquire a skill:** The truth is not everyone is made to be in school, not everyone has the patience to be in school, but that does not mean that you have to be a nuisance and live off of bread crumbs thrown at you. The truth is, in whatever you do, you must strive for excellence, and it is not in any way compulsory to go to school to achieve your goals. Many great men on earth did not sit down in the four walls of a classroom, they put their hands to good use. Learning a trade or acquisition of skill will go a long way to eradicate poverty in the lives of so many people and in the economy at large.
- 3 **The government should invest in the country tries its own resources:** The government should desist from going abroad for every single thing and invest its money on its own resources.
- 4 **Do away with child marriage:** As much as anyone does not consider this to be one of the reasons to eradicate poverty it is. A child who is supposed to have a future and add to the growth of the economy of its country is forced into a marriage at a young age. This is done by a myopic and poverty-stricken individual and in the end, such a child will be left with nothing other than what she has learned from her parents and husband which is not even enough to carry on in the world.
- 5 **Some other ways to end poverty in Nigeria are;** make provisions for privately owned enterprises in the country, have a plan and budget for the economy and see it through, put the government officials to work in different parts of the country and make them know that the people come first in everything, The government should be selfless and set their goals, rule of law (nobody should be above the law) and make provisions for indigenous farming.

Alleviating Poverty through Functional Education

- 1 Through functional education, qualitative manpower can be produced, if the educational system of any nation determines its type, nature and caliber of manpower to be supplied. The educational system and the commitment to human resource development have been attributed to their level of achievement and other breakthroughs experienced in functional education. The economic success of the so called 'Asian tiger' has been attributed to the educational system which are functional and the priorities given to human resource development. Refereeing to the successes of these developed nations, Asaju (2012) opined that when there are fairly well developed human resources, lack of abundant supply of other factors such as physical capital and technology does not posed any insurmountable barrier to sustained growth.
- 2 Human resources not capital or income, nor material resources constitute the ultimate basis wealth of a nation because they are just passive factors of production. It is the human resource that accumulates capital, exploit natural resources, build social, economic and political organizations and carry over national development (Harbison, 2013). All these are achieved through a functional education. No wonder, countries like Sweden, Norway, Denmark and Finland were adjudged to be the best countries to live due to their commitment to education (UNDP, 2009). While the developed countries have continued to achieve breakthroughs in every facet of their economy, the underdeveloped nations are still struggling to cope with the numerous developmental

challenges inhibiting their progress. The development of these nations are still bedeviled by challenges of high rate of unemployment, poverty, inequality, diseases, ethno religious crisis, and war political crisis among others that brought about untold hardship and pain to their populace (Asaju, Thomas and Silas, 2013).

- 3 The quality of the products of the educational system, the level of learner's achievement, the desperation of pupils to succeed as evidenced by unabated incidences and sophistication of examination malpractices, and falsification of credentials, frequency of teachers strike, and their poor quality, all point to inefficient performance of the system Ali (2000). The gross underfunding of the educational sector, coupled with other related problems of infrastructural decay, dearth of infrastructural facilities at all levels of the educational institutions, inadequate teaching and learning materials, incompetent teaching and learning materials, incompetent teaching staff, inconsistency and lack of clear cut education policy affect functional education.

Therefore, a functional educational system in Nigeria will bring about high-quality manpower that will turn around the available resources into wealth for the nation. The country will also experience a turnaround in science and technology, which will in turn affect all other sectors of the economy. Thus, the wealth of the nation will be redistributed to favour the poor populace. There would be many employment opportunities which will lead to income generation and invariably the decline in the high rate of poverty and inequality. This will further bring about an improvement in the well-being of the populace.

- 4 Functional education is a leveler of opportunities. The case in Nigeria where majority of the graduates of the educational institutions search for white collar jobs that are very scarce and difficult to secure will be a thing of the past. Functional education will bring about graduate who are entrepreneurs and self – dependent and ready to practice what they had learnt in school. These entrepreneurs will also become employers of labour. With this chain, more jobs will be created and income generated. The end result is that many will be uplifted from the dudgeon of unemployment and poverty. Thus, it can be adduced that there is a symbiotic relationship between functional education and poverty alleviation. Abubakar (2009) has attributed the poor quality of education in the country on the increasing level of poverty and unemployment in the country. He opined that if the problem of unemployment and poverty can be addressed in the country, the standard of education will definitely improve. Therefore, both poverty and functional education affect each other either way. Solving the problem of poverty will also reduce or lead to the elimination of other developmental challenges and social ills presently experienced in the country. Thus, vices like corruption, insecurity, bad governance, ethno religious crisis and even illiteracy among others could be attributed to high rate of poverty in the country. For instance, the Boko Haram insurgence has majorly been attributed to the high level of poverty and unemployment in the country, especially in the north eastern zone of the country.

Need for Re-organization of Secondary Education to make it Functional

- 1 The need for proper re-organization of secondary education in order to make it more

functional for the poverty alleviation in Nigeria today has become highly imperative. Of all the problems facing Nigeria today, none is as agonizing and persistent as the one relating to the problem of unemployment among school leavers. According to Aggorwal (2008) "All the knowledge a pupil gains in the school, all the culture the pupil acquires in the school will be of no use, if he cannot make both ends meet when he enters life". Secondary education can be made more functional, for economic and poverty alleviation if it is properly re-organised into vocational secondary education.

- 2 Realizing the unique place of vocational education as the basis for technological development and economic emancipation in Nigeria, the Federal Government has within the last three decades initiated some activities toward enlivening this aspect of education in the country. Such activities include:
 - a. Mass production of technicians in some overseas countries such as Romania, Bulgaria, Italy, France and so on, under the "Crash Training Programme".
 - b. Creation of more Polytechnics and Colleges of Technology, to supplement the six old Colleges of Technology located at Yaba, Ibadan, Auch, Ilorin, Enugu and Kaduna.
 - c. Establishment of Universities of Technology.
 - d. Introduction of Technical Education courses into some Colleges of Education.
 - e. Expanding facilities of old Colleges of Technology.
 - f. Importation of sophisticated science and technical equipment.
 - g. Providing more places for science intakes in the University through ratio 40:60 Arts - Science admission policy.
 - h. Introduction of 3-3 secondary education structure with the Junior Secondary School, running pre-vocational and academic subjects.
- 3 In spite of these laudable activities of the Federal Government towards improving vocational education, the volume of unemployment among school leavers in Nigeria continues to assume alarming proportions. As a way of reducing the incidence of unemployment among school leavers, the Federal Government in recent times has been campaigning for self-reliant education which is attainable through functional vocational secondary education.
- 4 Vocational education includes: "All activities directed by the school for the specific purpose of preparing individuals for successful participation in different fields of service". Based on this definition, vocational education requires the acquisition of practical and applied skills leading to the production of craftsmen, technicians and skilled personnel who will be enterprising and self-reliant.

Availability of Infrastructural Support for Functional Secondary Education as a Basis for Poverty Alleviation

- 1 **Teaching Personnel:** One of the most effective ways to bring about curriculum change, teaching improvement and quality instruction in schools is through highly competent and well-motivated teachers. According to Adesina (1980) "The heart of Nigeria's educational system is the teachers. Whether at the primary, secondary or university level; the teacher is and would continue to be both the major indicator as well as the major determinant of quality education". The economic and poverty alleviation in Nigeria can be well accomplished through functional secondary

education, if the school system is well staffed with highly motivated and well qualified teachers. Many secondary schools especially those in the rural areas are under-staffed, while some subjects, especially English language, Mathematics and Sciences are being taught in many schools by non-competent and unqualified teachers. The exodus of teachers from the profession to the more soul satisfying professions, occupations and trades has been a disservice to the school system. The rapid expansion of the secondary education system in Nigeria has not been adequately matched with increase in teachers' supply. Thus, the available teachers in the school are saddled with heavy teaching load. An overburdened teacher would undoubtedly produce a job of lower quality than would have been the case if he carried a normal teaching load. Therefore, in order to achieve effective economic and social reconstruction in Nigeria, through functional secondary education, the schools must be adequately staffed with sufficient, dedicated, motivated and innovative teachers.

- 2 **Physical Facilities and Instructional Materials:** Effective teaching and learning depend greatly on availability and adequacy of physical facilities and instructional resources. A functional secondary education as a basis for poverty alleviation in Nigeria, will be an onerous task to achieve if physical facilities and instructional materials are grossly inadequate in schools. As remarked by Adaralegbe (2013): From inspectors' reports over the years, there is abundant evidence of a catalogue of inadequacies in the appropriate provision and the judicious use of school buildings and materials for instruction. Classes had been held under unsafe and unhygienic conditions. Some school buildings had no ceiling with the unbearable consequences during the hot, very humid weather for about half of the school year. Some doors and windows had no shutters to keep off the rain from spoiling pupils and teachers' books and other school supplies. Some of the classroom floors had not been concreted, giving room for pupils to contact cold during the wet season and in the harmattan months. Also, library is non-existent in most of the schools. While the science laboratories are poorly equipped. Audio-visual materials like video tapes, transparencies, slides, pictures, audio-tape, film strips and graphic materials have been branded "luxuries" in most secondary schools in Nigeria. Thus, the poor physical and material support will make functional secondary education as a basis for poverty alleviation an herculean task to accomplish.
- 3 **Financial Support:** No education system can effectively carry out its function without sufficient funds at its disposal. Money is required to attract, retain and develop the staff, to maintain the school plant and procure other materials for effective functioning of the school. The secondary education in Nigeria today is poorly funded. Consequently, many schools have not been able to put up new buildings, major repairs of old dilapidated buildings have not been carried out and the purchase of equipment and apparatus for the technical workshops and science laboratories has become an onerous task. In spite of this poor funding, the Government has been placing high premium on free secondary education.
- 4 **Inspectoral Support:** Despite the fact that school inspection contributes significantly to the improvement of the school system, inspection of most secondary schools in Nigeria is being haphazardly carried out. Periodic inspection of schools has become a

thing of the past. Apart from inadequacy of school inspectors, lack of fund and transport facilities, also militate against effective supervision of the schools. Unless school inspectors are adequate in number to cope with the staggering number of primary and secondary schools and are provided with adequate funds and transport facilities, with well-defined goals of the mission, a functional secondary education as a basis for poverty alleviation in Nigeria may be an onerous task to be accomplished.

Conclusion

In a society, where certain educational institutions are meant for the privileged few, where parents have no prior right to choose the kind of education that shall be given to their children due to social, economic and political conditions and where the secondary education system is plagued with problems of inadequate teaching personnel in terms of quality and quantity; poor physical, material, financial, managerial and inspectoral support; it becomes an assiduous task to achieve poverty alleviation through functional secondary education. The following submissions are therefore made towards achieving effective poverty alleviation through a functional secondary education in Nigeria.

Thus, functional education is a panacea for reducing the high rate of poverty in Nigeria. Although, the educational system in Nigeria is still inefficient due to many factors, its functionality will bring about accelerated growth in the economy. When graduates of the country's educational institutions can independently practice what they learnt in school without waiting for office or government jobs, more jobs will be created and income enhanced. The technological revivals that will follow will also positively lead to industrial revolution which will lead to more job opportunities.

Recommendations

Based on what has been deliberated on, the following recommendations are proffered:

- 1 Teaching in schools should be geared towards critical thinking rather than reciting received knowledge from teachers and textbooks. Also, the school work should be practical and life centered.
- 2 As a result of high diversification of the secondary school curriculum with special emphasis on technical, vocational and citizenship education, the need for professional growth of the secondary school teachers becomes highly imperative. In-service education programmes such as workshops, seminars, refresher courses, vacation courses, conferences and so on should be periodically mounted to correct deficiencies of the poorly trained teachers, to help the inexperienced and to keep the teachers abreast of educational and social development.
- 3 Functional secondary education as a basis for poverty alleviation requires adequate funding. There is need for every taxable adult in Nigeria to pay education levy. Also, all companies, firms, commercial houses and other parastatals (both private and public) should contribute at least 25% of their annual profit to Education Fund. This policy must be enforced.
- 4 Regular field work, use of local technicians and environment should be emphasized in the secondary schools. Both boys and girls should be trained in building construction,

tile decoration, bricklaying, motor mechanics, electronics, metal works, technical drawing, wood works, creative arts, book keeping, typewriting, data processing, hotel management, catering services, telephone technology, poultry keeping, welding and so on.

5. The government at all level should show its commitment and political will to ensuring functional education through its funding, policy making, supervision and monitoring of educational projects and programmes.
6. A law should be enacted that will mandate the federal and state governments to adhere strictly to the UNESCO's recommendation that 24 percent of their annual budget be allocated to education.
7. The various supervisory agencies of the educational institutions and the Ministry of education should be more committed to playing their role as a watchdog in ensuring that all educational institutions from primary to tertiary operate within and abide by laid down standard.

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Integrating Basic Primary Education Curriculum into Qur'anic Education for Children for Sustainable Development in Bida, Niger State

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Abstract

The purpose of this study was to integrate universal Basic Education programme into the Qur'anic education for children for sustainable development in Bida, Niger state. The study was guided by two research questions and two research hypotheses. Survey research design was used to investigate the opinion of Qur'anic education teachers and UBE teacher in Niger State. The population for this study is all the Qur'anic education and UBE teachers in Niger state while simple random sampling was used to select 80 teachers of Islamic Studies and 15 teachers at Basic primary Education Schools. Some literature related to the study was reviewed. A structured questionnaire which consists of thirty-five (35) items divided into five parts was used to collect data to answer the research questions formulated to guide this study. This instrument was validated by three experts and the Cronbach's Alpha method was used to establish their internal consistency. Data was arranged and analyzed according to the research questions and the formulated hypotheses. Data collected for research questions were analyzed using means and standard deviation scores, while the Hypotheses were tested with t-test at 0.05 level of significance. Chief among the findings of the study is that the respondents agree on most of the elements of Universal Basic Education to be integrated into the Qur'anic system of Education for an age group of five years and above. Based on these findings, the researcher concludes that there is need for elements of Universal Basic Education to be integrated into the Qur'anic system of Education for an age group of five years and above. Efforts should be made by the government to equip Qur'anic schools with basic facilities like libraries and vocational centre to provide children with basic tools for further educational advancement, including preparation for trades and craft of the locality as proposed in the National Policy on Education.

Keywords: *Curriculum, Sustainable development, Primary education, Qur'anic education*

Background to the Study

The Qur'anic schools everywhere in the world impart knowledge to people at different levels. However, due to increase in population of human beings on the surface of the planet earth, the population of the Almajiris has also increased tremendously as a result of the search for Islamic knowledge. Qur'anic schools have been in existence in Nigeria even before the advent of western education and in the northern part of the country since the introduction of Islam. The Qur'anic School is the pre-primary and the primary levels of Islamic Education (Jibrin, 2008). It is an institution which has its origin traced to the prophetic period of Islamic education. It was Umar IbnKhattab who first organized children and young adults in the reading of the Holy Qur'an. The word Almajiri means children who beg around the street; these children are sent to learn in Qur'anic schools Almajiri (singular) according to Dukku (2016) is a corrupt Hausa word which originated from the Arabic word Almuhajirun meaning immigrants in search of knowledge like Qur'anic teacher and his pupil. However, the Qur'anic schools becomes a problem when the search for knowledge is not properly coordinated, planned and organized by the parents and the teachers of the schools due to various short comings. Research has shown that the sub-Saharan African has the highest number of Alimajiris who are either under fed or not properly educated (Jibrin, 2010).

The integration of UBE and Qur'anic schools will perhaps help the Almajiri to have access to basic education and equip them with skills necessary for self-employment upon graduation. Meanwhile, integration involves teaching literacy to Qur'anic school learners (almajiris) or having the two forms of education provided hand in hand in the same school. Suleiman (2013) defines integration as a means of diversifying the curriculum to allow the core- courses of basic education to be taught at the Qur'anic school level.

Education for Sustainable Development allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. Education for Sustainable Development means including key sustainable development issues into teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption.

The search for knowledge is an undeniable right of every child because; it is through knowledge that the child could appreciate and develop his/her potentials, that is, capability of what the child can do to earn a living, know his/her rights, that of his/her creator and others. The western (modern) form of education is regarded with suspicion by most Muslim parents because of some perceived misconception that include fear of conversion to another religion other than Islam and loss of morals. Junaid, Dukku and Umar, (2015) opined that the 1994 NTI/ UNICEF conference on Qur'anic schools was particularly instrumental in prompting government into action on the future status of Qur'anic schools. The period following this conference witnessed the emergence of a non-formal education curriculum for Qur'anic schools, approved by the National Council on Education, NCE in 2001; the formulation of an action plan and implementation guidelines for the integration of Qur'anic schools into conventional Nigerian school curriculum. Programme was set up for this purpose in 2002. Subsequent actions of government and other stakeholders are hinged on providing the

institutional and infrastructural needs of the Almajiri child. However, these efforts seem not to have realized the potentials of this integration as a bridge between the tenets propagated by the UBE and the values embedded in Qur'anic schools.

The integration of Qur'anic and UBE curriculum may expand the horizon of the Almajiris and widen their skills. It is also being expected that at the end of the nine years of continuous UBE education, every almajiri child would have acquired appropriate level of literacy, numeracy, communication, manipulation and self-skills so as to be employable, useful to himself and to the society at large by possessing the relevant ethical, moral and civic values. The need to research on the integration of Qur'anic education into UBE for children in Minna motivated this study.

Statement of the Problem

The Almajiris are pupils enrolled in traditional Quranic schools that are prevalent in many parts of northern Nigeria. Although Quranic schools are highly revered religious institutions that have played vital roles in Muslim societies in pre-colonial northern Nigeria, the challenging demands of modernity tend to put the future of these schools at risk. Pupils enrolled are consequently denied effective participation in formal basic education and are not adequately catered for by either the state or their communities. Concern over the future of millions of children enrolled in Quranic schools has led to the official adoption of integration policy by the Federal Government intended to position them within the framework of the Universal Basic Education (UBE) programme for the purpose of attaining Education for All (EFA) and Millennium Development Goals (MDGs).

Although the integration policy is widely accepted by stakeholders of the Qur'anic schools, there are contentious issues which seem to devolve on the implementation of this policy vis-a-vis the peculiarities of these schools, their pupils, and the socio-economic rhythms of their local communities which have the tendency to exclude rather than integrate them into the regular schools. Therefore, the study is to find out ways that could be adopted for integrating Universal Basic Education (UBE) curriculum into the Quranic education for sustainable development in Bida, Niger State?

Purpose of the Study

1. Determine the elements of basic education that can be integrated into qur'anic schools.
2. Find out the prevocational skills that can be integrated into qur'anic schools

Research Questions

To guide the study, the following research questions will be posed:

1. What are the elements of basic education that can be integrated into Qur'anic education?
2. What are the pre-vocational skills that can be integrated into qur'anic schools?

Hypotheses

To guide the study, the following null hypotheses are formulated and will be tested at 0.05 levels of significance.

Ho₁: There is no significant difference between the mean responses of Qur'anic education teachers and UBE teachers on the subjects to be integrated.

Ho₂: There is no significant difference between the mean responses of Qur'anic teachers and teachers in UBE schools on pre-vocational skills that will be integrated into Qur'anic schools.

Research Methodology

A descriptive survey research design was used for this study. The study was carried out in Bida, Niger State. The population of the study comprises all the head teachers of the qur'anic schools and UBE schools within the study area, numbering 177 Mallams in the qur'anic schools and 28 head teachers in UBE schools, which gave a total of 205 Mallams/head teachers. The sample size for the study consists of 177 Mallams who are the head teachers of the qur'anic schools and 28 head teachers of UBE schools totalling 205. Census sampling techniques was adopted in selecting all the head teachers of the qur'anic and UBE Schools because the number was manageable. The head of the schools are involved in the administration of the schools and can help in identifying the need for integrating UBE Schools programme into qur'anic schools and the basic subjects for integration. The instrument is titled Integrating Basic Primary Education Curriculum into Qur'anic Education Questionnaire (IBPECQEQ). The instrument for data collection was designed by the researcher and was validated by three experts. One of the validates was from childhood education, one from psychology and another one from measurement and evaluation department all in university of Nigeria Nsukka.

Thirty copies of the developed instrument were trial tested at Minna in Niger State. The choice of Minna was because Minna has the same demography with the study area. Data collected was analysed for determine the reliability of the instrument using Cronbach Alpha. Cronbach Alpha is applied to instruments that are not scored dichotomously. The reliability coefficients for the instrument is 86. The IBPECQEQ, which is a structured questionnaire, was administered in two forms. First, by self-response questionnaire to the head teachers and secondly, through verbal interpretation of the questionnaire to the Qur'anic school Mallams (teachers) who do not understand English was administered by the researcher with the help of a research assistant who were employed and trained by the researcher. The completed questionnaire was retrieved back from the respondents and returned to the researcher immediately. Descriptive statistics such as mean was used for answering the research questions, while t-test was used to test the null hypothesis at 0.05 level of significance. The response of head teachers and Mallams on the integration of UBE and Qur'anic schools were interpreted using real limit of numbers as follows; 0 – 1.49 (strongly disagree), 1.50 -2.49 (disagree), 2.50 -3.49 (agree) and 3.50 -4.00 (strongly agree).

Results

Research Question One: What are the elements of Universal Basic Education to be integrated into the Qur'anic system of Education for an age group of five years and above?

Table 1: The mean ratings and standard deviations of teachers of Qur'anic Education and teachers of Basic Primary Education on elements of Universal Basic Education to be integrated into the Qur'anic system of Education are as follows:

S/N	Items	X	SD	D
1	English Language curriculum	3.34	.45	A
2	Mathematics curriculum	3.61	.57	SA
3	Basic Science curriculum	3.33	.37	A
4	Social Studies curriculum	3.30	.41	A
5	Agriculture curriculum	3.53	.34	SA
6	Cultural and creative arts curriculum	3.34	.25	A
7	Physical and Health Science curriculum	3.34	.46	A
8	Computer Education curriculum	3.74	.53	SA

Key: N = Number of Respondents; SD = Standard Deviation; df = Degree of Freedom; NS = Not significant at 0.05 probability level.

Data on table one shows the mean scores and standard deviations of teachers of Qur'anic Education and teachers of Basic Primary Education on elements of Universal Basic Education to be integrated into the Qur'anic system of Education. The mean scores of the respondents are: 3.34, 3.61, 3.33, 3.30, 3.53, 3.34, 3.34 and 3.74, with corresponding Standard Deviation of .45, .57, .37, .41, .34, .25, .46 and .53. This shows that they agree that items 1, 3, 4, 6 and 7 be integrated into the Qur'anic system of Education. As they strongly agree that items 2, 5 and 8 be integrated into the Qur'anic system of Education.

Research Question Two: What are the pre-vocational skills to be integrated into the Qur'anic system of Education for an age group of five years and above?

Table 2: The mean ratings and standard deviations of teachers of Qur'anic Education and teachers of Basic Primary Education on the pre-vocational skills to be integrated into the Qur'anic system of Education for an age group of five years and above are as follows:

S/N	Items	X	SD	D
9	Welding	3.21	.40	A
10	Tailoring	2.20	.42	A
11	Cap making	2.32	.41	A
12	Computer operator	3.68	.38	SA
13	Agrarian	3.22	.41	A
14	Furniture making	3.24	.43	A
15	Barbing	2.36	.48	D
16	Weaving	3.40	.50	A
17	Tie and dye	3.42	.49	A
18	Trading	2.42	.48	D
19	Embroidery	3.42	.49	A

Key: N = Number of Respondents; SD = Standard Deviation; df = Degree of Freedom; NS = Not significant at 0.05 probability level.

Data on table 2, shows the item Mean scores (X) and Standard Deviation (SD) of teachers of Qur'anic Education and teachers of Basic Primary Education on pre-vocational skills to be integrated into the Qur'anic system of Education for an age group of five years and above. The mean scores of the respondents on the items are: 3.21, 2.20, 2.32, 3.68, 3.22, 3.24, 2.36, 3.40, 3.42, 2.42 and 3.42, with corresponding Standard Deviations of .40, .42, .41, .38, .41, .43, .48, .50, .49, .48 and .49. This shows that they agree that items 9, 10, 11, 13, 14, 16, 17 and 19 are pre-vocational skills to be integrated into the Qur'anic system of Education. The above table also shows that the respondents strongly agree that the prevocational skill in item 12 be integrated while they disagree that item 15 and 18 to be integrated into the Qur'anic system of Education for an age group of five years and above.

Hypothesis 1:

There is no significant difference in the mean scores of Qur'anic Education teachers and UBE teachers on elements of Universal Basic Education to be integrated into the Qur'anic system of Education.

Table 3: T-test analysis of mean scores on elements of Universal Basic Education to be integrated in to the Qur'anic system of Education are as follows:

Respondents	No	Mean	SD	t-cal	df	Prob. level	Sig (2tailed)	decision
Qur'anic teachers	80	3.97	.473	-2.74	93	0.05	0.10	Significant
UBE teachers	15	3.36	.462					

Key: N = Number of Respondents; SD = Standard Deviation; df = Degree of Freedom; NS = Not significant at 0.05 probability level.

The t-test result in table 3 revealed the opinions of Qur'anic teachers and UBE teachers on elements of Universal Basic Education to be integrated into the Qur'anic system of Education. The table shows that t-calculated value is -2.74 and the Sig. (2-tailed) is .010, while the probability level is 0.05. Since Sig. (2-tailed) of .010 is less than Probability level of 0.05, it is significant. Therefore, there is a significant difference between the mean scores of Qur'anic education teachers and UBE teachers on elements of Universal Basic Education to be integrated into the Qur'anic system of Education.

Hypothesis 2

There is no significant difference in the mean scores of Qur'anic Education teachers and UBE teachers on pre-vocational skills to be integrated into the Qur'anic system of Education for an age group of five years and above.

Table 4: T-test analysis of mean scores on pre-vocational skills to be integrated into the Qur'anic system of Education for an age group of five years and above is as follows:

Respondents	No	Mean	SD	t-cal	df	Prob. level	Sig(2tailed)	decision
Qur'anic teachers	80	3.12	.443	0.40	93	0.05	0.97	Not significant
UBE teachers	15	3.93	.412					

Key: N = Number of Respondents; SD = Standard Deviation; df = Degree of Freedom; NS = Not significant at 0.05 probability level.

The t – test result in table 4 revealed the opinions of Qur'anic Education teachers and UBE teachers on pre-vocational skills to be integrated into the Qur'anic system of Education. The table show that t–calculated value is 0.40 and the Sig. (2-tailed) is 0.97 while the probability level is 0.05. Since Sig. (2-tailed) of 0.97 is greater than Probability level of 0.05, it is not significant. Therefore, there is no significant difference between the mean scores of Qur'anic Education teachers and UBE teachers on pre-vocational skills to be integrated into the Qur'anic system of Education for an age group of five years and above.

Discussion

The result of research question one indicates that teachers of Qur'anic Education and teachers of Basic Primary Education agrees that English Language, basic Science, social Studies, cultural and creative arts and physical and Health Science curriculum are elements of Universal Basic Education to be integrated into the Qur'anic system of Education. They also strongly agree that Mathematics, Agriculture and Computer Education curriculum be integrated in to the Qur'anic system of Education for an age group of five years and above as in line with Suleiman (2013), the Qur'an has been the core-curriculum of this system of education since its inception not only because it is a Holy book but also it is playing a central role in the life of a Muslim politically, socially, spiritually and economically. However, these findings show that the entire subject curriculum taught in the UBE need to be integrated into the Qur'anic system of Education. This is not surprising given that these UBE subjects are reconcilable and complementary to the goals of Qur'anic system of Education. Similar to the observations of Suleiman, they also have practical significance in the day-to-day functioning of the child and the society. Thus, when planned and integrated into the Qur'anic system of Education, the child (product of Qur'anic system of Education) will be well equipped with basic tools for further educational advancement, including preparation for trades and craft of the locality as envisaged in the National Policy on Education 2004.

These findings that suggest the integration of the entire UBE subject's curriculum is also consistent with the conclusion of Yabo (2014), that the role of education in Islam to be that of producing well-disciplined, highly skilled and reasonable human beings who are conscious of their duties to Almighty Allah (God) and committed to the service of their society. This is because one of the basic objectives of UBE is to produce highly skilled and functional men in the society. Hence, integrating these UBE subjects' curriculums will complement the Qur'anic system of Education. As in line with Dukku (2016), integration in this respect entails

strengthening of the existing Qur'anic and Islamiyya schools to achieve their goals and accommodate the introduction of basic education elements of literacy, numeracy, life and vocational skills subjects into their curriculum.

The findings of this study also indicated that there is a significant difference between the mean scores of Qur'anic Education teachers and UBE teachers on elements of Universal Basic Education to be integrated into the Qur'anic system of Education. The mean scores of the Qur'anic Education teachers were found to be significantly higher than the mean scores of UBE teachers. This suggests that the Qur'anic Education teachers who are major stakeholders in the implementation of Qur'anic system of Education are in dire need of this integration. The hypothesis formulated to guide this study in this respect is therefore rejected.

The results of research question two showed that the pre-vocational skills to be integrated into the Qur'anic system of Education for an age group of five years and above include welding, tailoring, cap making, computer operator, agrarian and furniture making. Others are weaving, tie and dye and embroidery. These pre-vocational skills are consistent with the objective of Qur'anic system of Education which intend to equip the learner with life and vocational skills that will assist them in their day-to-day activities and also equip them with generative skills (Jibrin, 2010). The primary purpose of vocational education is to prepare persons for employment in recognized occupation. Hence, the central purpose of vocational educational is to get the people in to jobs requiring specialize training. The findings of this study therefore suggest that integrating the above pre-vocational skills can aid in achieving that. In that sense, when these pre-vocational skills are successfully integrated for an age group of five years and above, the objective Qur'anic system of Education producing functional members of the society will be realized. On the other hand, the result show that barbing and trading as pre-vocational skills are not to be integrated into the Qur'anic system of Education for an age group of five years and above. This suggests that these pre-vocational skills are not amenable to the Qur'anic system of Education.

The findings of this study also indicated that there is no significant difference between the mean scores of Qur'anic Education teachers and UBE teachers on pre-vocational skills to be integrated into the Qur'anic system of Education for an age group of five years and above. The hypothesis formulated to guide this study in this respect is therefore accepted.

Conclusion

This study intended to integrate universal Basic Education programme into the Qur'anic Education for children in Bida, Niger state. The following conclusions are made on the basis of the findings of the study:

1. That the entire subject curriculum taught in the UBE need to be integrated into the Qur'anic system of Education.
2. Most of the pre-vocational skills to be integrated into the Qur'anic system of Education for an age group of five years and above can equip children with life skills to be functional members of the society.

3. Therefore, there is a significant difference between the mean scores of Qur'anic Education teachers and UBE teachers on elements of Universal Basic Education to be integrated into the Qur'anic system of Education
4. There is no significant difference between the mean scores of Qur'anic Education teachers and UBE teachers on pre-vocational skills to be integrated into the Qur'anic system of Education for an age group of five years and above.

Recommendations

1. Universal Basic Education curriculum should be integrated into the Qur'anic system of Education for an age group of five years and above through curriculum reform.
2. Qur'anic Education teachers should be adequately motivated by adequate remuneration.
3. In-service training and seminars should be held from time to time to improve the teaching methods and style to teachers to acquaint them with the current teaching methods that can be used to reconcile the UBE curriculum with the Qur'anic system of Education.
4. Qur'anic schools should be provided with ICT equipment and laboratory to lay sound basis for scientific and reflective thinking in children.

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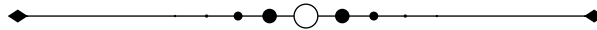
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A Speech Act Analysis of Governor Nyesom Wike's 2015 Inaugural Address

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Abstract

Governor Wike of the People's Democratic Party became the Governor-elect after Nigeria's Gubernatorial Election which took place on 11th of April 2015 at the Liberation Stadium, Port Harcourt. The central goal of an inaugural speech such as that of Wike is to make claims, unify and mobilize the audience. The speech analyzed in this study is the inaugural address delivered by the Governor-elect. Selected utterances from the speech are analyzed to find out how the speaker skillfully deployed speech acts that are germane to the psychological context of the speech, occasioned by the past administration. Hinging on J. L. Austin's (1962) Speech Act Theory as well as Searle's 1969 speech act typology, the study reveals that the speaker used four speech acts: *expressive*, *assertive*, *commissive* and *directive* acts. The Governor used the *expressive* act nine (9) times (45%), this is due to the governor's intention to express his disappointment, anger, pain over the last administration. *Assertive* act occurred seven (7) times (1.4 %), this is because the Governor was poised to inform the listeners about the ineptitude of the previous government. He pledged to make a new Rivers State through *Commissive* act which occurred three (3) times (0.6%). And finally, he used *directive* act once in the speech (0.2 %), to instruct the listeners that all hands must be on deck to move the state forward. The study concludes that speech acts have intentional contents which are products of speaker-hearer shared knowledge, and persuasive use of language in political speeches presupposes the use of different communicative strategies.

Keywords: *Speech Act, Democratic party and Election System*

Background to the Study

An inauguration is a formal ceremony to mark the beginning of a major public leader's term of office. The "inaugural address" is a speech given during this ceremony which informs the people of his/her intentions as a leader (Lagu, 2021). Political inaugurations often feature lavish ceremonies, in which the politician publicly takes his or her oath of office in front of a large crowd of spectators. The equivalent ceremony in another jurisdiction may be called a "swearing-in". Furthermore, other than personal inaugurations, the term can also refer to the official opening or beginning of an institution or structure, for example the inauguration of a new government. The word inauguration stems from the Latin *augur*, which refers to the rituals of ancient Roman priests seeking to interpret if it was the will of the gods for a public official to be deemed worthy to assume office. An inauguration site is a ceremonial site that is for someone of a public figure (Wang, 2010). The inauguration of Nigerian governors takes place after every four-year tenure of previous administration. The ceremony has only one mandatory element, which is the swearing of the oath of office by the governor elect. However, over the years, other celebratory elements have been added to this ceremony, creating an entire day of special events (Loudenslager, 2012). Aside from a parade or a dance ball in the evening, the newly sworn governor also delivers a speech, called an inaugural address. With the Chief Justice, the Deputy Governor and the public as witnesses, the new governor delivers his address, during which his plans for the new term are stated.

The Concept of Pragmatics

Pragmatics is seen as the study of language use in particular communicative contexts or situations of necessity, this would take cognizance of the message being communicated or the speech act being performed; the participants involved; their intention, knowledge of the world and the impact of these on their interactions; what they have taken for granted as part of the context; the deductions they make on the basis of the context; what is implied by what is said or left unsaid etc. (Leech, 1983, p. 20; Watson and Hill, 1993, p. 146; Thomas, 1995, p. 7).

Undoubtedly, political discourse has been a major domain of language use that has attracted the interest of researchers for a long while. This is because political discourse is a complex human activity that deserves critical study particularly because of its central place in the organization and management of society. Political language deals with the use of power to organize people's mind and opinion. It is an instrument used to control the society in general. Political speech can be seen as a means of establishing and maintaining social relationships, expressing feelings, and selling ideas, policies, and political projects in any society. In pragmatics, one of the most important phenomena is Speech Act Theory; Speech Acts, the propositions/locutions performed often depend on the speaker's intention and the context in which the propositions are uttered. This study tries to find the meaning of utterances based on the context of the speaker (Governor Nyesom Wike of Rivers State).

Statement of the Research Problem

Inaugural speech according to Ayeomoni and Akinkuolere (2012) are used by politicians to reaffirm their commitment to serve by reiterating the programmes of their party and electioneering campaign promises. It is in line with this view that Denton and Hahn (1986)

opine that the presidency or governorship office has been recognized as a rhetorical institution whose speeches are enlivened by power to persuade and convince the nation or society. Campbell and Jamisson (1990, p. 29) in Amaechi (2016) are of the opinion that inaugural addresses are “essential elements in a ritual of transition in which the covenant between the citizenry and their leaders is renewed. They categorise inaugural addresses as a type of discourse that Aristotle calls epideictic discourse. Many scholars (Uduk and Gunn, 2022; Gunn and Ishaya, 2020; Awonusi, 1996; Opeibi, 2003; Ayeomoni and Akinkuolere, 2012; and Akinwolu, 2013) have looked in the area of speech acts in political speeches but to the best of this researcher's knowledge, no work has been carried out on analysis of speech acts in the inaugural speech of Governor Wike. This study thus, has the intention to bridge this gap.

Objectives of the Study

The objectives of the study are to:

1. Identify speech acts features in the inaugural speech in relation to the contexts and settings.
2. Determine how the identified speech acts features project the message presented in the speech.
3. Identify the speech acts in relation to their functions and.
4. Examine the frequency of the speech acts in the inaugural speech.

Research Questions

The study seeks to answer the following questions:

1. What are the speech act features in relation to the contexts and settings in which the speech was presented?
2. How do the identified speech acts feature project the message presented in the speech?
3. What are the functions of the speech acts in the inaugural speech?
4. What is the frequency of each of the speech acts in the inaugural speech?

Review of Related Literature

This section contains a review of past studies on the subject of discussion. Research has actually shown that a number of persons have carried out numerous research on topics related to the one at hand. A prominent contribution on speech analysis is the research conducted by Omozuwa and Ezejideaku (2009) on the stylistic analysis of the language of political campaigns in Nigeria. Here, the authors set out to unravel the significance of the aesthetic use of language in campaign speech. They observe that political campaign language is characterized by propaganda through attack on party, exaggeration, vagueness and diatribes. Furthermore, the language of campaigns is characterized by pidgin, coinages, allusion, promises, literary language, repetitions and they are rhetoric in figurative term.

In the study conducted by Agbedo (2011) on “fuel subsidy removal and mind game in Nigerian: a critical discourse analysis perspective”, he critically examines how the Nigerian government employs language to influence the opinions and views of the generality of Nigerians. The research employed the theoretical and methodological aspect of Critical Discourse Analysis. The government use language in order to make the citizens support their

moves intended towards the removal of the subsidy which will invariably result in an increase in the price of petroleum products. Agbedo observed that dominant groups in our contemporary society use all shades and hues of language to create coercive tactics, persuasion and or interpersonal and group base influence, manipulation to control public discourse and run unpopular policies down the throat of the silent majority or populace equally appropriates the vocative power of discourse and accesses to the media to resist the systemic class domination and oppression.

In a study conducted by Ahamefula and Okoye (2012) entitled *felicity or insincerity: The pragmatics of selected speeches of Nigeria public leaders*; they looked at the use of language by the then president of Nigeria, Chief Olusegun Obasanjo and pointed out that the then president violates the basic tenets of the Gricean cooperative principle and Austin's felicity conditions which all propagate the need for good communication between and among people and groups of people. Thus, they pointed the following expressions in the president's word which they observed from their finding to buttress their point: "this idiot, go get a job" a statement he used against the media chiefs to express his frustration towards their attempts to analyze and broadcast his words and actions as the president; "shut up"- his outburst to the victims of the Ikeja Military Cantonment Bomb blast when they cried out to him.

Alo (2012) examines the political speeches of well-known African leaders with a look of viewing how politicians beg the Africans on the expediency of different political and socio-economic policies and plans to facilitate African economic recovery and development. The study also looked at a rhetorical analysis of selected political speeches of famous African leaders where it gathered that the speeches of African leaders are preoccupied with the political and socioeconomic problems of the continent and the need for change. The study revealed four dominant ideological preoccupations which are: national unity, nationalism, globalism and self-reliance.

Waya and Nneji (2013) in their work adopted the Speech Act Theory of Austin (1962) and Searle (1969) in the analysis of their speech corpus. Using the Overall Relative Frequency Percentage (ORFP) as a methodological technique, the study discovers that Jonathan made use of assertive acts than other speech acts. The study revealed that the sentences that were vindictive and directive made way for him to assert authority and exercise constitutional power as the president. The study concluded that good governance becomes visible and possible if the leaders work in line with their beautiful promises. Therefore, the paper seeks to fill a major gap by examining the ideological component of change adopted by Governor, Nyesom Wike in his 2015 first tenure inaugural speech.

Aboh (2016) studied Jega's speeches during the 2015 Nigeria general election. The main purposes of the work are to identify the extent at which Jega's speeches reflect the values of INEC and the outcomes of Jega's electoral speeches. The researcher adopted cooperative principle and critical discourse analysis for analysis of data. For the analysis of Jega's two speeches, he adopted the descriptive method. Having used the maxims of cooperative principle, the researcher observed that the whole sections fulfilled the maxim of quantity. He

added that the speech A fulfilled the maxim of quality, but speech B flouted the maxim, thus committing a conversational implicature. The researcher also noted that Jega's speeches reflected the values of INEC. The values include: autonomy, integrity, credibility, equity, impartiality, dedication, excellence, transparency and teamwork. The study also stated that the informative power of Jega's speeches is very strong as it lured people to act positively towards the information. The study recommended that anyone preparing for a speech should do that meticulously in order to ensure a value-added speech. Also, other researchers should endeavour to study the speeches of various stakeholders who are not really politicians.

In the same vein, Chukwu (2016) looked into President Muhammadu Buhari's language use using Critical Discourse Analysis as its framework. The speeches for this work were gotten via internet and newspaper and were selected using purposive sampling method. The study provided insights to the strategies adopted by Muhammadu Buhari in his speeches. These include: deployment of pronoun, propaganda and presentation of topical issues, etc. The study exposed the fact that Buhari made use of adequate pronouns in uniting and aligning himself with the electorates and masses. The study also revealed his use of propaganda which served as a linguistic tool for the defamation of rival's character and upliftment of personal image. Conclusively, the study noted that Buhari's language use is aimed at diverse purposes ranging from his aim to manipulate the mindset of the electorates so as to get their trust and his desire to impress the masses and foreign representatives.

Nwoye (2017), evaluated selected media interviews of Government spokesperson and the citizens of Nigeria. The study investigated the discursive strategies employed by the government and Nigerian citizens on some crucial national issues in order to reveal power and dominance. The study sampled twenty media interviews from which forty-seven were utterances extracted and analyzed. The research revealed that both the government and citizens used these pro-forms: 'we', 'I', 'our', 'you' and 'me' respectively. The study stated that it is within solidarity that their pronouns were used to establish oneness and attraction of public sympathy. The government used some of the pro-forms to represent the government as an entity that is inclusive in their discharge of duty, while the citizen used the pro-forms to attract sympathy, challenge and encourage the government. Framing as a strategy is employed by both sides of the discourse as pointed out by the researcher. On the side of the government, framing accounts for the ways government spokesperson apportion blames on the past government. On the part of the citizens, blames are shifted to the government and the President respectively. From the reviews thus far, it can be seen that none of the researchers have carried any research on the Speech Act Analysis of Governor Nyesom Wike of River State. The reviews show that political speeches have several effects on the citizens. Most speeches are employed by government for ulterior motives. The research tends to fill the gaps seen from the previous studies.

Theoretical Framework

Speech Acts Theory

Austin's 1962 Speech Act theory as expounded by Searle (1969) will serve as the theoretical backcloth to this study. According to Babatope (2017), "Speech Act Theory is an important

concept which relates utterance meaning in context”. The idea of the Speech Act Theory is that when a speaker or a language user makes use of certain utterances there are some acts inherent in the speech. Austin (1962) termed these utterances performatives. According to him, a speaker can perform three acts concurrently. These three acts propounded by J.L Austin are listed below:

- i. Locutionary act-This simply refers to the exact utterance.
- ii. Illocutionary act-This refers to a speaker's intended meaning of the utterance.
- iii. Perlocutionary act- This refers to the expected outcome of the utterance made by the speaker. It is simply the perception of the illocutionary act. However, it is important to note that Searle (1999) outlined a classification of the Illocutionary Acts. Various scholars/studies have presented different subdivisions of speech. This study however accedes to Searle's 1999 taxonomy. The illocutionary acts classified by Searle goes thus:
 - a. Assertives: This can also be referred to as representatives. These are utterances that reveal the belief(s) or position of a speaker concerning a particular thing or situation. Searle (1999) says “it is used to present the proposition as representing the state of affairs in the world.” (p. 28). Examples of assertive are factual statements, assertions, definitions, conclusions etc.
 - b. Directives. These utterances are used by a speaker to make his listeners/hearers to operate based on his directive. It simply means that it is used to make a listener/hearer do what the speaker pleases. According to Searle (1999) “the illocutionary force of a directive is to try to get the hearer to behave in such a way as to make his behaviour match the propositional content of his directive” (p. 28). Examples of directives are orders, instructions, orders and suggestions.
 - c. Commissives: Commissives are acts used by a speaker to reveal his/her future intentions to his listeners. Searle (1999) defines commissives as “those illocutionary acts whose point is to commit the speaker to some future course of action.” (p. 29). The commissive statements are used to commit a speaker to some future activities. They are expressed in form of pledges, vows, promises, refusals, covenants and oaths.
 - d. Expressives: These are statements that capture the thoughts, state of mind, feelings and emotions of a speaker. Searle (1999) posits that “the illocutionary point of this class is to express the psychological state specified in the sincerity condition about a state of affairs specified in the propositional content.” (p. 30). The expressives are known for revealing the psychological state of mind of a speaker. According to Enyi (2015) “These utterances state what the speaker feels.” Examples of expressives are statements of apology, appreciation, condolence, congratulations, happiness, pain and thanksgiving.
 - e. Declaratives: These can also be referred to as declarations. According to Yule (1996) declarations are those kinds of speech acts that change the world via their utterance.” In this type of act, the utterances used by the speaker have an institutional role within a particular context. According to Searle (1999), “declarations bring about some alteration in the status or condition of the

referred to object or object solely in virtue of the fact that declarations have been successfully performed.”

Research Methodology

The Descriptive qualitative method of analysis was employed in order to foreground the illocutionary acts within the inaugural speech. This is in consonance with the works of Creswell (1998) and Moleong (2003) on descriptive qualitative method of research. The data for analysis were retrieved from the internet: the inaugural speech of Governor Nyesom Wike. Using the purposive random sampling technique, only twenty (20) locutions (excerpts or utterances) were selected. This selection is based on the fact that the governor's inaugural address is heavily loaded with various illocutionary acts. The researcher labeled the locutions 'utterance 1-20'. The choice of 20 locutions was precipitated by the desire to carry out a detailed analysis.

Data Presentation and Analysis

Structure of the Speech

The structural element of the speeches presupposes the structural arrangements of the speech in terms of paragraphing and sentences that make up the speech. Analysis Wike's Inaugural Speech of 29th May, 2015, marked his official inauguration as the Executive Governor of Rivers State for a single term of four (4) years. It is a speech of 53 paragraphs: about 301 lines with a total number of about 5, 117 words.

Table 1: Speech Acts of Inaugural Speech of Governor Nyesom Wike

SN	Locution (utterances)	Illocutions	Perlocutions/interpretation
1.	My beloved people of Rivers State. It is with great humility and gratitude to God Almighty, who makes all things well that I address you today.	Expressive	Speaker appreciating God for the victory.
2.	Rivers State has been rescued and reclaimed. It is a new day in our history, a new dawn to repair and restore our dear State to the path of sanity.	Commissive	Speaker promising better days for the citizenry.
3.	During the campaigns, we visited several communities in all the local government areas. We met with thousands of people including civil servants, teachers, students, doctors, lawyers, traders, market women, the business community, pensioners and the unemployed.	Assertive	Making factual statement
4.	We noticed that so many people were worried about the pervasive poverty in the land and the hardship they and their families were going through.	Assertive	Stating the reality of things
5.	Friends, let us be frank to ourselves. Today, Rivers State is at the crossroads. The economy is in shambles and retreating by the day. Poverty is pervasive. The rate of unemployment remains a nightmare to our youths. Workers and pensioners salaries are months in arrears unpaid.	Expressive	Expressing and revealing the psychological state of the speaker
6.	No doubt, Rivers State has just been relieved of the most decadent case of maladministration in our history – an administration that mindlessly borrowed and frittered public resources on wasteful projects, sold our valuable assets at underpriced rates to fronts and cronies and left the State financially crippled with a heavy debt burden.	Assertive	Lamenting the state of things in Rivers State.
7.	For four years my predecessor ruled over us with the mindset of a dictator and promoted impunity to levels unimaginable. For as long as he presided, all his actions and inactions were prodded by obsessive lust for power actuated by a self-indulgent messianic gusto.	Expressive	Speaker expressing his pains and anger over the last administration.
8.	In his desperation to sabotage our vision, he refused to consent to a smooth transition and mischievously left us to wallow in the dark. He prevented us from accessing even the most elementary ceremonial facilities in his custody.	Expressive	Expressing his feelings (pains) over the previous administration.
9	As you know, every democratic government rest on a tripod. Good governance principles always dictate the supremacy of the rule of law as well as the equality, autonomy and interdependence of the Executive, the Legislature and the Judiciary.	Assertive	Stating the actualities of things.
10	Unfortunately, these hallowed principles of democracy and good governance meant nothing to my predecessor in office who, despite being the direct beneficiary of the rule of law, became its greatest betrayer with imperious rascality.	Expressive	Expressing his anger and pains over the previous administration.
11	For four years our dear Rivers State was denied the electoral services of the State House of Assembly. For reasons of self-preservation the Assembly was sharply divided, and the Governor's lackeys exchanged their dignity for wraps of rotten porridge from Government House.	Assertive	Speaker telling listeners how the last administration was run.
12	For the same reasons of self-preservation, the outgoing administration deliberately contrived a needless succession crisis in the State's judiciary and instigated an irrational strike among the staff of the Judiciary to completely dislocate the judicial system.	Assertive	Speaker telling listeners how the last administration was run.
13	Not done with his destructive agenda, the former Governor descended on our traditional institutions. He deliberately bastardized and desecrated our time-honoured traditional institutions by the wanton balkanization of a number of such stools as it suited his ego.	Expressive	The speaker is expressing his feelings of pains over the last administration.
14	I commend you all on the pains you have had to bear and the inconveniences you have had to endure while the macabre dance lasted from a truly bitter ruler on an imaginary vengeance mission. But the good news is that it is over! It is indeed over. I salute the warriors of our struggle who made today possible.	Expressive	Speaker commending and appreciating the citizenry for their resilience to stand strong in the last dispensation.
15	Congratulations again my dear people of Rivers State. Let the freedom bells ring! Let the people shout for joy. Let them leap and sing to God, who heard our cries and today impunity and tyranny have been put to rout. The vicissitudes of the old ignoble order have come to pass.	Expressive	Speaker congratulating the citizens.
16	But this we promise. Never again, shall our people and our land be subjected to destruction and waste by those we mistook, perhaps, for builders. They failed us. They took away our mandate, pilfered our resources and, like the prodigal son, wasted them with strangers.	Commissive	Speaker promising the electorate a better administration in the State.
17	As we reiterated at several fora during the campaigns, our blueprint is an agenda of hope. We pledge to offer a New Rivers Vision based on a new thinking.	Commissive	Speaker vows and pledges to deliver its best for the State.
18	Now that we have become victorious and have arrived at the home ward end of our beautiful waterside, it is time to work, to erect landmarks of progress and prosperity.	Assertive	Speaker stating the actualities of things to come.
19	Now is the time for us to rebuild. To rebuild our State; to rebuild our educational and health institutions; to rebuild our occupations and to rebuild our infrastructure.	Directive	Speaker giving instruction as to how to rebuild the state.
20	Thank you all for coming. Thank you all for your attention and May God continually bless our land.	Expressive	Speaker showing gratitude to the electorates/citizens.

Data analysis

Expressive

Expressive acts state the opinion of the speaker by stating what he feels. It is an act that performs functions of showing or revealing the state of minds of the speaker in the form of statement which include praising, thanking, encouraging, assuming, inspiring, apologizing, congratulating etc. The following extracts exemplify the expressive acts in the speech.

Locution 1: My beloved people of Rivers State. It is with great humility and gratitude to God Almighty, who makes all things well that I address you today.

Locution 5: Friends, let us be frank to ourselves. Today, Rivers State is at the crossroads. The economy is in shambles and retrogressing by the day. Poverty is pervasive. The rate of unemployment remains a nightmare to our youths. Workers and pensioners salaries are months in arrears unpaid.

Locution 7: For four years my predecessor ruled over us with the mindset of a dictator and promoted impunity to levels unimaginable. For as long as he presided, all his actions and inactions were prodded by obsessive lust for power actuated by a self-indulgent messianic gusto.

Locution 8: In his desperation to sabotage our vision, he refused to consent to a smooth transition and mischievously left us to wallow in the dark. He prevented us from accessing even the most elementary ceremonial facilities in his custody.

Locution 10: Unfortunately, these hallowed principles of democracy and good governance meant nothing to my predecessor in office who, despite being the direct beneficiary of the rule of law, became its greatest betrayer with imperious rascality.

Locution 13: Not done with his destructive agenda, the former Governor descended on our traditional institutions. He deliberately bastardized and desecrated our time-honoured traditional institutions by the wanton balkanization of a number of such stools as it suited his ego.

Locution 14: I commend you all on the pains you have had to bear and the inconveniences you have had to endure while the macabre dance lasted from a truly bitter ruler on an imaginary vengeance mission. But the good news is that it is over! It is indeed over. I salute the warriors of our struggle who made today.

Locution 15: Congratulations again my dear people of Rivers State. Let the freedom bells ring! Let the people shout for joy. Let them leap and sing to God, who heard our cries and today impunity and tyranny have been put to rout. The vicissitudes of the old ignoble order have come to pass.

Locution 20: Thank you all for coming. Thank you all for your attention and May God continually bless our land.

Commissive

Utterance 2: Rivers State has been rescued and reclaimed. It is a new day in our history, a new dawn to repair and restore our dear State to the path of sanity.

Utterance 16: But this we promise. Never again, shall our people and our land be subjected to destruction and waste by those we mistook, perhaps, for builders. They failed us. They took away our mandate, pilfered our resources and, like the prodigal son, wasted them with strangers.

Utterance 17: As we reiterated at several fora during the campaigns, our blueprint is an agenda of hope. We pledged to offer a New Rivers Vision based on a new thinking.

Assertive

Utterance 3: During the campaigns, we visited several communities in all the local government areas. We met with thousands of people including civil servants, teachers, students, doctors, lawyers, traders, market women, the business community, pensioners and the unemployed.

Utterance 4: We noticed that so many people were worried about the pervasive poverty in the land and the hardship they and their families were going through.

Utterance 6: No doubt, Rivers State has just been relieved of the most decadent case of maladministration in our history – an administration that mindlessly borrowed and frittered public resources on wasteful projects, sold our valuable assets at underpriced rates to fronts and cronies and left the State financially crippled with a heavy debt burden.

Utterance 9: As you know, every democratic government rest on a tripod. Good governance principles always dictate the supremacy of the rule of law as well as the equality, autonomy and interdependence of the Executive, the Legislature and the Judiciary.

Utterance 11: For four years our dear Rivers State was denied the electoral services of the State House of Assembly. For reasons of self-preservation the Assembly was sharply divided, and the Governor's lackeys exchanged their dignity for wraps of rotten porridge from Government House.

Utterance 12: For the same reasons of self-preservation, the outgone administration deliberately contrived a needless succession crisis in the State's judiciary and instigated an irrational strike among the staff of the Judiciary to completely dislocate the judicial system.

Utterance 18: Now that we have become victorious and have arrived at the home ward end of our beautiful waterside, it is time to work, to erect landmarks of progress and prosperity.

Directive

Utterance 19: Now is the time for us to rebuild. To rebuild our State; to rebuild our educational and health institutions; to rebuild our occupations and to rebuild our infrastructure.

Table 2: Frequency, Distribution of Speech Acts in Governor Nyesom Wike's Inaugural Speech

Speech Acts	Frequency	Percentage
Expressive	9	45
Commissive	3	0.6
Assertive	7	1.4
Directive	1	0.2
Total	20	100%

Source: Field Work 2024

Discussion of Findings

The data from the study as shown from the table above revealed that Governor Nyesom Wike used four (4) speech acts in his first tenure of 2015 inaugural speech. The speech acts are *Expressive*, *Commissive*, *Assertive* and *Directive*. *Expressive* acts account for the highest occurrence in the entire acts used by the governor. The governor uses the *expressive* acts nine (9) times with 45% of the illocutionary acts performed. Next to this are *assertive* acts that occurred seven (7) times which have illocutionary acts of 1.4 %. *Commissive* acts occurred three (3) times with 0.6%. *Directive* speech act occurred once in the speech with 0.2%.

Governor Wike used the *expressive* act to communicate his gratitude to the Almighty God for his grace and who makes all things well (Locution 1). He also uses *expressive* act to congratulate the people of Rivers State (Locution 15) for election victory. The preponderance of *expressive* acts in the speech are due to series of personal feelings of disappointment, lamentation of challenges faced by the citizenry in the previous administration, anger and pains meted on the people of the State. This can be seen in locutions 1, 5, 7, 8, 10, 13, 14, 15 and 20. Next in the act is *assertive* acts, the speaker uses this act to vent his anger in the last administration. He makes factual statements, describes and reports situation of things in the state as can be found in locutions 3, 4, 6, 11, 12 and 18.

Further, *Commissive* acts are employed to build trusts between the speaker and the listeners. *Commissive* acts in the speech are due to series of promises to restore the state to the path of sanity (locution 2 and 16). The Governor also vows and pledges to deliver projects, programmes, innovations and a new Rivers vision. These promises that normally have perlocutionary force of commitment, loyalty, hopefulness etc. are parts of the efforts made by Governor Wike to persuade and convinced his listeners (electorates) of his intention to deliver dividends of democracy (locution 17).

Directive act recorded the lowest occurrence; this was used by the speaker to instruct the electorates on how to rebuild the state. The speaker (Governor) also used this speech act to

achieve his goals, stabilize his government or deliver dividends of democracy (utterance 19). Finally, *declarative* act was not recorded in the governor's speech. This is a cautious attempt by the speaker not to be seen as being draconian or overbearing especially in a democratic setting. Inaugural addresses are not occasions where statements that can portray the speaker as being proud or bossy, hence, this act was avoided by the governor.

Conclusion

In this study, we have investigated the functions of speech acts in an extended body of discourse. It is, indeed, the performance of certain acts: making statements, giving instruction, describing, explaining, vowing and pledging, thanking, congratulating, and so on, as the analysis shows in governor Nyesom Wike's 2015 first tenure inaugural speech. Indeed, language use in political discourses is worthy of contemporary research. The study has analysed the speech of the inauguration delivered by Nyesom Wike using speech act theory. The speech act analyses have unveiled how the governor has presented modalities of realizing their campaign promise to the people of Rivers State. The analysis has revealed the predominance of *expressive* acts in the inaugural address. The analysis has further revealed that the speaker has used language directly to assert and promise his listeners within the contexts in which the address was delivered.

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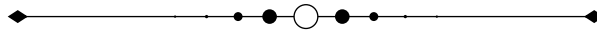
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Political Regimes and Economic Development in ECOWAS: A Study of Governance and Growth Dynamics

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Abstract

Most African countries have witnessed both autocratic military and liberal civilian regimes whose systems have yielded their respective impact on the development of their respective countries. The direction of this research is towards ascertaining the impact of political regimes on the economic growth of the selected West African countries. Applying panels ARDL for its robustness, the outcome revealed that the impact of political regimes on economic growth is country-specific and heterogeneous. Overall, we found no significant short-run impact of the political regime on economic growth. Specifically, some countries have witnessed positive impacts; both Liberia and Sierra Leone have witnessed significant and positive influence of political regimes on economic growth. While the influence from Liberia is about 0.433 per cent, that of Sierra Leone is 0.138 per cent, all things being equal. But in the long run, the general impact of political regimes on economic growth in the selected West African countries is 0.0173 per cent and significant. While Liberia and Sierra Leone had witnessed civil war in recent years during the period of military regime which is why the positive impact of political regime on economic growth in the country, other countries have had some minor political crises that did not lead to war.

Keywords: *Political regime, Economic growth, ECOWAS*

Background to the Study

The Economic Community of West African States (ECOWAS) is a region characterized by a variety of political regimes, ranging from stable democracies to autocratic governments. These political systems have played a critical role in shaping the economic development of its member countries. Over the period from 1981 to 2021, ECOWAS nations have undergone significant political transitions, including democratization and authoritarian rule, each of which has influenced governance structures and economic policies. Given the persistence of governance challenges and political instability in several member states, it is crucial to explore how these political regimes impact economic growth. Scholars argue that the quality of governance and political stability are key drivers of sustainable economic development (Feng, 1997; Lin & Hsiao, 2021). Therefore, the relationship between governance and economic outcomes becomes particularly important in the ECOWAS context.

Despite regional integration efforts and numerous policy interventions, ECOWAS countries continue to exhibit inconsistent economic performance. While countries like Ghana and Nigeria have recorded periods of significant growth, others such as Liberia and Sierra Leone have struggled with political instability, weak institutions, and stagnating economies (Adams et al., 2016). These disparities raise pertinent questions about the role political regimes play in shaping economic outcomes. Do democratic regimes promote better economic development by fostering transparency, accountability, and stronger institutions, or can authoritarian regimes, through centralized control, achieve more effective economic management? The complex relationship between political governance and economic development in ECOWAS remains insufficiently explored, particularly within the dynamics of governance quality and political stability.

The main objective of this study is to examine the impact of political regimes on economic development within the ECOWAS region, with a particular focus on Ghana, Liberia, Nigeria, Senegal, and Sierra Leone from 1981 to 2021. Specifically, the study aims to investigate the influence of political regimes on economic growth in selected ECOWAS countries (Ghana, Liberia, Nigeria, Senegal, and Sierra Leone) and to determine whether this influence is homogeneous across these nations. Through examining the governance structures and economic outcomes in these countries, the study seeks to understand how political regimes impact growth and whether the dynamics of this influence differ based on each country's unique political and economic context. (Weede, 1996; Ghardallou & Sridi, 2020). By addressing these objectives, the research will provide a comprehensive understanding of how different political systems influence economic outcomes across ECOWAS member states. This study will contribute to the existing literature on governance and economic development in Africa, particularly within the context of regional integration and political transformation. Furthermore, the research will provide evidence-based recommendations for policymakers on how governance reforms can be leveraged to foster more inclusive, stable, and sustainable economic growth in the ECOWAS region. These findings will be essential in guiding efforts to enhance political stability and governance quality across member states, ultimately supporting the region's development agenda.

Literature Review

The relationship between democracy, political regimes, and economic growth has been extensively examined, with varying conclusions across different contexts and methodologies. Lin and Hsiao (2021) explore how the impact of democracy on growth is contingent on a country's growth rate. Using quantile regression on dynamic panel data, they find that democracy positively influences growth in low-growth countries but has a weaker effect in high-growth economies. This suggests that democratic institutions can foster growth when economies are underperforming, but their benefits diminish once higher growth levels are achieved. This nuanced finding underscores the importance of considering growth heterogeneity when assessing the democracy-growth nexus. Adams et al. (2016) investigate the role of democracy in moderating the relationship between energy consumption and economic growth in sub-Saharan Africa. Their use of a panel vector autoregressive model reveals that democracy strengthens the positive feedback loop between energy consumption and economic growth. This finding highlights the broader role that democratic governance plays in managing resources and supporting sustainable development. Their research aligns with other studies that emphasize how political regimes shape economic outcomes through the management of public goods like energy (Ahmed et al., 2022).

Feng (1997) adopts a simultaneous equation model to examine how democracy and political stability affect economic growth. Feng's results show that democracy indirectly promotes growth by reducing the likelihood of regime change and enhancing political stability. His study also finds that political stability, in turn, supports economic growth by encouraging long-term planning and reducing uncertainty. These findings are consistent with Durham (1999), who also emphasizes the stabilizing role of democratic institutions in fostering sustained economic growth, particularly by reducing political risk and fostering investment in advanced democracies. Jamali, Wandschneider, and Wunnava (2007) focus on the importance of democratic regimes for economic growth, particularly through the protection of property rights, higher investments in education, and technological advancements. Their study suggests that democracies create environments conducive to innovation and efficient production, which are key drivers of economic growth. This aligns with the findings of Saha and Sen (2021), who demonstrate that democracy fosters economic growth by reducing corruption and enhancing the credibility of institutions, thereby boosting investor confidence and long-term economic performance.

Other studies, such as Ghardallou and Sridi (2020), provide a broader review of the literature on democracy and economic growth, highlighting how democratic institutions contribute to economic development through channels like human capital, institutional stability, and innovation. Similarly, Colagrossi, Rossignoli, and Maggioni (2019) conducted a meta-analysis, finding that democracy has a direct but modest positive effect on growth, particularly when human capital is accounted for. They suggest that while democracy can positively influence growth, its effects vary significantly across regions and periods, further reinforcing the complexity of this relationship. In sum, the empirical literature reveals that democracy's impact on economic growth is not uniform but is shaped by various factors such as growth rates, resource management, political stability, and institutional quality. While democracy

tends to promote growth through mechanisms like increased investment in education and technology, its benefits are more pronounced in lower-growth contexts or regions where democratic institutions are strong. Conversely, in high-growth economies or autocratic settings, the effects of democracy on growth are less consistent, often depending on other political and economic variables.

Economic and Political Indicators: A Nigeria Example

Before delving into the relationship between the political indicators and economic indicators in Nigeria, it should be pertinent to analyze the procedure of the ratings and indicators. The political indicators comprise regime indicators for Freedom House Institute (FHI) and economic indicators include the growth rate, unemployment rate and inflation rate. Regime is measured by political right (PL) and civil liberty (CL), the weighted ranking is as follows; countries that fall between 1-2.5 are free, between 3.0 –5.5 are partially free and between 5.5 – 7.0 are not free. From 2003, the ranking changed to 3.0 – 5.0 for partially free countries. Growth rate, unemployment rate and inflation rate are measured in percentages.

The graph shows that in Nigeria from 1998-2017, the weight of the regime falls between 3.0-5.5 which shows that the country is partly free. On the graph, the corruption perception index for Nigeria ranks between 10 to 29 which shows that the country is highly corrupt and it shows that there was more corruption during the military rule. The economic growth peaked in 2002 with CPI ranking 16. the highest unemployment rate was in 2012 where 12% and CPI was ranked 27. The inflation rate was high, about 19% in 2001 while economic growth was at 5% and 14% and CPI was ranked at 10 and it was during the military regime.

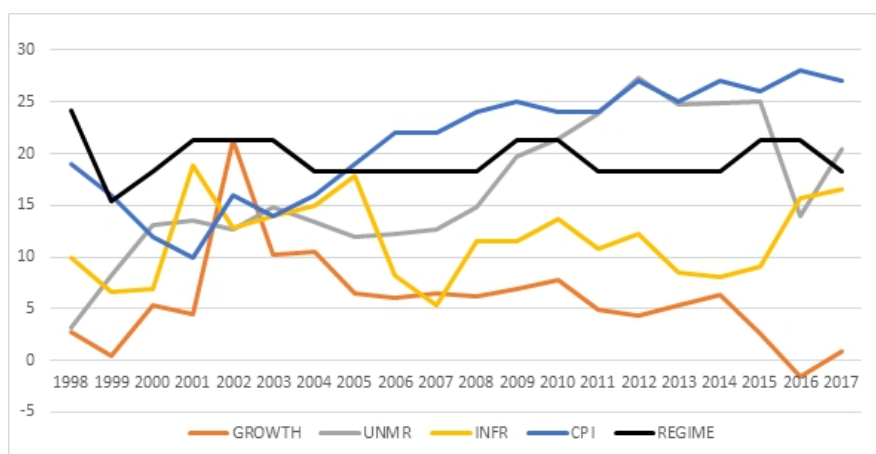


Figure 1: Graphical representation of Economic and Political Indicators in Nigeria
Data Source: UNCTAD, World Bank, Transparency International, Freedom House Institute

Methodological Notes

Model Specification

The main objective of this research is to examine the role of political regimes on the economic growth of selected West African countries, covering the period of 1981 to 2021. Following the

growth model of Buss and Koniger (2012) and including indexes for measuring political regimes, which could be regarded as a country-specific variable which affects economic growth. Thus,

$$\Delta y_{it} = \beta_0 + \beta_1 y_{it-1} + \beta_2 S_{k,it} + \beta_3 N_{it} + \beta_4 X_{it} + \beta_5 F_{it} + \varepsilon_t \quad (1)$$

The connotation of the variables remains is explained as follows;

Δy_{it} represents economic growth

y_{it-1} Stands for lagged economic growth

$S_{k,it}$ is representing investment and in this instance, is a foreign direct investment as a percentage of fixed capital formation.

N_{it} stands for population growth

X_{it} represents trade openness which is defined as the ratio of trade to GDP.

F_{it} Stands for political regimes index,

However, there are various well-defined problems associated with this model. The explanatory variables are potentially endogenous. Again, some vital variables like the initial level of technology and some country-specific effects are not observable hence, are omitted herein. Moreover, following the direction of Mankiw et al (1992) and Buss and Koniger (2012), this will include the required control variables of the original Solow model. Hence, the saving rate (S_k) is proxied with foreign direct investment as a percentage of gross fixed capital formation and the average population growth will be used in place of the labour force growth rate (N). On the other hand, the growth rate of the world technology (g) and the depreciation rate (δ) are assumed to be constant across time and therefore are omitted in the regression.

Trade openness (X_{it}) and political regimes represented by (F_{it}) are innovative and uniquely represented in the model to capture country-specific effects on economic growth. Normally, the researcher will take the aggregate value of a trade or separately as import and export to measure their impacts on economic growth. This research will continue to trade on the part of Buss and Koniger (2012) by measuring trade with respect to trade openness-the share of trade to GDP. In the unique way of this research and to ensure a better representation of trade this paper will adopt the import approach of measuring trade.

Finally, as a dependent variable, the research will use the growth rates GDP per capita $\ln y_{it} - \ln y_{it-1}$ and will henceforth be labelled as Δy_{it} while the compulsory lag will be taken as y_{it-1} . Equation (1) will be modified for estimation based on the technique employed.

Scope and Data

This study examines the impact of political regimes on the economic growth of five selected ECOWAS countries. The research covers a period of 41 years ranging from 1981 to 2021 inclusive. This period is relevant because it is long enough to get reasonable results from the contending variables which were relevant for the analyses. The sources of data are diverse, economic growth, population growth and foreign direct investment as percentages of gross fixed capital formation are obtained from UNCTAD. Trade openness is defined as the ratio of

trade to GDP and the data are also from UNCTAD. Data defining the political regime is obtained from the Freedom House.

Estimation Technique

For this analysis, variables must be stationary either at level or first Difference, making the Im, Pesaran, and Shin (2003) unit root test (IPS) the preferred method for checking stationarity. The study explores two main estimation techniques: The Mean Group (MG) estimator, which addresses slope heterogeneity and estimates short- and long-term coefficients, and the Pooled Mean Group (PMG) estimator, which assumes homogeneous long-term parameters but allows for heterogeneous short-term ones (Pesaran & Smith, 1995; Pesaran, Shin & Smith's, 1999, 2001). To determine the most suitable estimator, a Hausman (1978) test is conducted. If the p-value is below 0.05, the null hypothesis that MG and PMG estimates do not significantly differ is rejected. The study ultimately aims to assess the true impact of digitization on economic growth, considering the long adaptation period required for software implementation in modern systems.

In general, this displays an ARDL panel (p, q, q..., q) model;

$$y_{it} = \sum_{j=1}^p \delta_{ij} y_{i,t-j} + \sum_{j=0}^q \beta_{ij} X_{i,t-j} + \gamma_i + \varepsilon_{it} \quad (5)$$

Where y_{it} is the dependent variable, $(X'_{it})'$ is $M \times 1$ vector that is stationary at a level or first Difference; δ_{ij} represents the coefficient of the lagged dependent variable to be estimated; β_{ij} is $M \times 1$ coefficient vectors; γ_i stands for fixed effects such that; $i=1, \dots, N$; $t=1, 2, \dots, T$; p, q are optimal lag orders to be determined by estimating the unrestricted model; ε_{it} represent the white noise.

The re-parameterized panel ARDL (p, q, q..., q) error correction model for this paper is represented as follows, with all variables in natural logarithm;

$$\Delta y_{it} = \theta_i [\Delta y_{i,t-1} - \phi'_i (S_{k,i,t} + N_{i,t} + X_{i,t} + F_{i,t})] + \sum_{j=1}^{p-1} \lambda_{ij} \Delta y_{i,t-j} + \sum_{j=0}^{q-1} \phi'_{ij} \Delta S_{k,i,t-j} + \sum_{j=0}^{q-1} \phi'_{ij} \Delta N_{i,t-j} + \sum_{j=0}^{q-1} \phi'_{ij} \Delta X_{i,t-j} + \sum_{j=0}^{q-1} \phi'_{ij} \Delta F_{i,t-j} + \alpha_i + \varepsilon_{it} \quad (6)$$

Notes: θ_i = coefficient for speed of adjustment to equilibrium, which is expected to be less than 0.

ϕ'_i = Coefficients of long-run relationships

$ECT = [\Delta y_{i,t-1} - \phi'_i (\ln S_{k,i,t} + \ln N_{i,t} + \ln X_{i,t} + \ln F_{i,t})]$ represent the error correction term to be estimated.

λ_{ij}, ϕ'_{ij} represent the short-run dynamic coefficients.

Analysis and Results

Summary Statistics and Correlation

The correlation is reported in Table 1 while the summary statistics are displayed in Table 2. It indicated that while there are 15 countries examined in this research, there are 205 numbers of observations which represents 14 observations from each country of the ECOWAS. The mean

values of the respective variables, as well as the standard deviation, maximum values and minimum values, are all contained in the tables for readers' perusal. On the other hand, the correlation coefficient indicates that no variable is strongly correlated to each other as will be used in the model, except for one case. There is an indication that economic growth and population growth are highly correlated. This means that population growth will have a direct impact on economic growth; the regression outcome is expected to have a similar result. This could be a little surprise as one will expect that terrorism should be able to deter foreign investors. However, the variable (FDI) will also be suitable as an instrumental variable.

Table 1: Correlation Matrix and Descriptive Statistics

Panel A Correlation Matrix					
Variables	Δy_{it}	F_{it}	X_{it}	N_{it}	$S_{k,it}$
Δy_{it}	1				
F_{it}	0.339	1			
X_{it}	-0.054	-0.457	1		
N_{it}	0.651	0.269	0.00655	1	
$S_{k,it}$	0.00357	-0.0321	0.0871	-0.144	1
Panel B Descriptive Statistics					
Statistics	Δy_{it}	F_{it}	X_{it}	N_{it}	$S_{k,it}$
mean	3.6	-3.76	0.53	2.55	28.62
Std. Dev.	12.1	24.69	0.72	1.26	72.43
Min	-51.03	-88	0.1	-1.84	-206.82
max	106.28	8	6.37	7.85	664.42
N	205	205	205	205	205

Sources: The Authors

Stationarity Test and Lag Selection

The unit root results presented in Table 3 are the augmented dickey fuller test. The ADF test was chosen because it is widely used and its output is said to be robust. The results show that all the variables are stationary at level except for trade openness which is stationary at first difference. Economic growth, political regime index, and population are stationary at a one per cent level of significance. FDI as a percentage of fixed capital formation rate is stationary at a 5% level of significance while the stationarity of trade openness is statistically significant at one per cent. The stationarity of each of the variables as presented in Table 3 are greater than the critical value. Although all the variables are stationary at the first difference it does not matter due to the method of analysis conducted for the study which is ARDL as long as none is stationary at the second difference.

Table 2: Augmented Dickey-Fuller (ADF) Unit Root Test

Variables	Level t-statistics	p-value	Ist difference t-statistics	p-values	Order of integration
Δy_{it}	-5.5666	0.0000	-12.3713	0.0000	1(0)
F_{it}	-2.500350	0.0025	-9.2391	0.0000	1(0)
X_{it}	-0.6063	0.2722	-7.6539	0.0000	1(1)
N_{it}	-9.2569	0.0000	-14.6892	0.0000	1(0)
$S_{k,it}$	-1.7528	0.0398	-10.4565	0.0000	1(0)

Source: Authors computation using stata 14 edition

Cointegration and Hausman Tests

Pedroni cointegration test was conducted to determine if there is a long-run relationship in the first place. The result as reported in Table 5 revealed that there is a long-run relationship given that the majority of the test statistics give the indication. The indication is on the assumption that the value of the referred statistics should be above the absolute value of two /2/ to be able to reject the null hypothesis of no cointegration. From the result in Table 5, one can see that the rho-statistics for the panel is above the absolute value of two. Likewise, the t-statistics for both panel and group and the ADF-statistics yield similar results.

Table 3: PEDRONI Cointegration Test

Test Stats.	Panel	Group
v	0.8523	.
rho	-2.472	-1.891
t	-6.816	-7.547
adf	-6.304	-6.745

Source: authors computation using stata 14 edition

All test statistics are distributed $N(0,1)$, under a null of no cointegration, and diverge to negative infinity (save for panel v).

On the other hand, having established there is a long-run relationship between the dependent variables and the independent variables in the group, it is paramount to establish the model for the analyses. Hausman (1978) test was performed. This was to test the null hypothesis of homogeneity through a Hausman-type test, based on the comparison between the mean group (MG) and pooled mean group (PMG) estimators. The decision is to reject the null hypothesis if the prob-value is less than 0.05. But given the outcome here, the prob-value ($\text{Prob} > \chi^2$) = 0.2649. This invariably implies accepting the null hypothesis and applying the pooled mean group (PMG) estimators to estimate the regression model.

The Short Run and Long Run Analyses

The error correction model result represents the short-run coefficient results. First, the model revealed through its ECT coefficient that there is a long-run relationship between the

dependent variable and independent variables. The revelation is through its negative and significant coefficient which forms one of the criteria for determining long-run relationships using ARDL technique. Employing the pool's mean group for determining the short-and long-run results, the full estimation also revealed results for respective countries in the short run. Table 6 shows details of the estimated results.

Statistically, the impacts of political regimes on economic growth in ECOWAS are diverse and heterogeneous across countries. The effect is statistically significant in some countries but not in some other countries. First taking a look at the general model, the impact of political regime on economic growth is negative but not significant. However, both Liberia and Sierra Leone were reported to have a positive impact and also statistically significant. This means that an improvement in the political regime would impact positively on the economic growth of these countries. It should be noted that both these countries suffered from civil war in the early nineties and even up to the late nineties. Therefore, there is no doubt that their results are different from the other who though must have undergone various political turmoil at some point in time which also resulted in military takeovers. Looking at the results for the model representing Ghana, Nigeria, Senegal and Sierra Leone, their outcome concerning the political regime is insignificant, while Liberia, Nigeria and Senegal's real growth are exported to Table 4.

Table 4: Short-run Regression Result (ARDL)

VARIABLES	General	Ghana	Liberia	Nigeria	Senegal	Sierra Leone
ECT	-.274* (0.1442)	-0.606***	-0.900***	-0.729***	-0.922***	-0.916***
$D. F_{it}$	-.2964 (0.4082)	-0.00606	0.433***	0.015	-0.688	0.138*
$D. X_{it}$	-16.64* (8.751)	-2.446 (7.143)	-7.445***	-20.1	-22.04	18.66
$D. N_{it}$	8.657 (7.217)	-11.64*** (3.219)	0.387	54.64***	-0.841	4.282
$D. S_{k,it}$	-0.0123 (0.0106)	-0.0217 (0.0425)	0.0411***	-0.013	-0.0368	0.0195
Constant	-1.027 (0.741)	-3.751*** (1.451)	-12.68***	-3.928**	-6.463***	-6.184***
Observations	205	205	205	205	205	205

Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1 (Lag: 2, 0, 1, 1, 1)

Unlike the short-run results, the long-run outcome reports the general effect for the selected countries. The outcome as reported in Table 5 and Table 6 indicates that there is a long relationship between the political variables, other variables as used here and economic growth. Table 7 now shows the outcome of the long-run effects which is reported to be positive and significant with respect to the impact of political regimes. The result shows that as the countries' index increases by one per cent for a better political regime-democratic regime, economic growth will appreciate as much as 1.78 per cent, all things being equal. In other words, a democratic environment improves the economic growth of all these countries and should be appreciated by the regional government.

Table 5: Long Run Result (ARDL)

<i>L. F_{it}</i>	0.0178* (-0.0364)
<i>L. X_{it}</i>	4.279* (-2.223)
<i>L. N_{it}</i>	3.229*** (-0.718)
<i>L. S_{k,it}</i>	0.0421*** (-0.015)
Observations	180

Note: Standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Discussion of Findings

The impact of political regimes on economic growth in ECOWAS countries is highly heterogeneous across nations. The general model suggests that, overall, political regimes have a negative but statistically insignificant effect on economic growth in the region. However, in specific cases like Liberia and Sierra Leone, the relationship is both positive and statistically significant, indicating that improvements in political regimes have bolstered economic growth in these countries. This aligns with findings from Feng (1997), who emphasizes the importance of political stability for fostering economic growth, especially in post-conflict nations. Both Liberia and Sierra Leone experienced devastating civil wars during the 1990s, and their return to stable democratic governance has likely played a critical role in their economic recovery. Similarly, Adams et al. (2016) underscore how democratic governance can improve resource management, which may have been a key factor for growth in these recovering economies. In contrast, for countries such as Ghana, Nigeria, and Senegal, the impact of political regimes on economic growth is statistically insignificant, suggesting that other economic or structural factors may be more influential in driving growth. This mirrors the findings of Colagrossi, Rossignoli, and Maggioni (2019), who note that the effect of democracy on growth can vary significantly across countries and periods.

In the long run, the effects of political regimes on economic growth become more pronounced and positive across the selected ECOWAS countries. The analysis shows that as political regime indices improve by one per cent—particularly with transitions toward more democratic systems—economic growth can increase by as much as 1.78 per cent. This reinforces the idea that democratic environments create conditions conducive to long-term economic stability and growth, as democratic regimes tend to foster greater institutional stability, property rights protection, and innovation, which are critical drivers of growth (Jamali, Wandschneider, and Wunnava, 2007; Saha and Sen, 2021). Furthermore, the long-run results align with Lin and Hsiao's (2021) findings that democratic institutions tend to have a more substantial positive impact on growth in lower-performing economies, which is particularly relevant for countries in West Africa that have struggled with political instability in the past.

Conclusions

The main essence of this research is to determine the role of political regimes in the economic development of some selected West African countries. It is believed that autocratic governments hardly provide a good environment for economic activities to boost and hence could be retarding growth. Most of the West African countries have witnessed both military regimes which are believed to be autocratic and civilian regimes which are more liberal and democratic. Democratic is adjudged to offer a friendly business environment which could also ease the way of doing business in the country hence, culminating in economic progress for the nation. In other to assess the impact of various political regimes on the economic growth of a nation, this paper has reasoned that political regimes be integrated in an augmented Solow model where it will be taken as a country-specific characteristic to which could lead to improvement of technology. The argument here is that the country-specific variable will aid human capital development and contribute to providing an environment for research and development.

However, based on the assumption of the research, the paper implemented panel ARDL for the reason of its uniqueness and dynamic evaluation. The outcome revealed that the impact of political regimes on economic growth is country-specific and heterogeneous. Overall, we found no significant short-run impact of the political regime on economic growth. Specifically, some countries have witnessed positive impacts; both Liberia and Sierra Leone have witnessed significant and positive influence of political regimes on economic growth. While the influence from Liberia is about 0.433 per cent, that of Sierra Leone is 0.138 per cent, all things being equal. In the long run, however, the general political regime on economic growth in the selected ECOWAS countries is positive and significant. The political regime was found to affect the economic growth of 0.0178 per cent, all things being equal. Based on the foregoing, it is therefore advisable to develop and stabilise democratic institutions to enable the strengthening of the democratic culture in the regional government structures. Democratic regimes will provide a trusted business environment for foreign investment to thrive.

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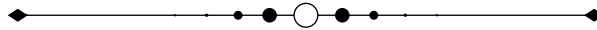
Oil Price Shock, Economic Growth and Openness in the COVID-19 Era

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Abstract

This paper examines the link between oil price shock, economic growth, and openness using data from 1980 to 2020. Regression was used to estimate the short and long-run results. The results reveal that oil price shock has a negative and imperative impact on economic growth in the short run. However, as the economy becomes more buoyant, the shock in oil prices tends to positively impact economic growth in the long run. Trade openness also positively and significantly impacts economic growth in the short run. Yet, trade openness and exchange rates were found to be statistically less influential in the long run. This implies that the negative oil price shock is more visible in the short run while the impact is dispelled in the long run. Thus, policymakers need to pay attention to the role of exchange rates and comparative trade benefits to economic growth.

Keywords: *Oil price, Growth, Volatility, Openness*

Introduction

The global oil price has become increasingly volatile in recent times. Increasing demand in developing countries and rising supply led by United States production is said to have contributed to the volatility of oil prices. Importantly, the current COVID-19 pandemic has surprisingly pushed oil prices to a new low. The United States crude oil benchmark contracted to a negative value for the first time in the second quarter of 2020. Similarly, the price of Brent crude oil, which represents the global price, also fell significantly to approximately \$18.38 per barrel in April 2020, representing the worst of its kind since the 1990s (OPEC, 2020).

Contraction in economic activities, which reduced China's oil demand by 20% in the COVID-19 era, has further worsened the predicament. It was projected that major oil-producing countries like Iraq, Nigeria, and Angola would likely see a drop in their net income from 50% - 85% compared with 2019 (IEA, 2020). This will result in the lowest income generated from the sector by these countries over two decades. Thus, revenues could fall further depending on future market conditions. Nigeria, one of the world's largest crude oil producers, the 10th largest producer and the 6th largest exporter among OPEC members, has experienced a major contraction in its economic growth (OPEC, 2020).

The fall in the price of crude oil in the COVID-19 era to less than \$25 per barrel has led to a fiscal deficit on the Nigerian government budget and a subsequent contraction in its growth rate to a negative value of -6.1% and -3.2% during the second and third quarter of the year 2020 (NBS, 2020). These consecutive negative growth rates have dragged the economy into recession. Later, the economy came out of recession during the first quarter of 2021 with a positive gross domestic product growth rate of 0.10%. Thus, the measures put in place to contain the impact of COVID-19 have a negative effect on economic activities.

Furthermore, given that Nigeria's level of investment is low, trade openness and foreign capital are of immense importance in accelerating the pace of economic growth. The Nigerian economy presently depends largely on foreign trade, which is the exportation of crude oil to generate revenue for the government and achieve economic growth. This has not allowed for balanced economic growth, as some sectors have been allowed to grow while others are lagging. This has made it difficult for the present government to fully diversify the economy, so the economy has remained a developing country (Kawai, 2016).

This paper contributed to existing studies in the following respects. One, the study incorporates recent oil price volatility, economic growth, and trade openness data of the COVID-19 period in its analysis. Two, it contributes to the inconclusive debate on the nexus between oil prices, economic growth, and trade openness during a pandemic era. Three, the study will be of immense importance to policymakers in further understanding the effect of over-reliance on crude oil can have on economic growth. Thus, this paper examines the link between oil price volatility, economic growth and trade openness in Nigeria.

Methodology

Estimation method and data

This paper used the Autoregressive distributed lag (ARDL) method developed by Pesaran et al. (2001) as the estimation approach. The use of this method is informed by the following reasons: (i) unlike the Vector Autoregressive (VAR) method, the ARDL method combines both endogenous and exogenous variables; (ii) the method can be used for different orders of variable integration, whether purely $I(0)$, purely $I(1)$ or combination of both; (iii) the method estimates the short and long-run models simultaneously. To develop the ARDL model, we begin by specifying the general functional form of the model, followed by the econometric form of the model in equations 1 and 2.

$$Y_t = f(OP_t, ER_t, TO_t) \tag{1}$$

$$Y_t = \pi_0 + \pi_1 OP_t + \pi_2 ER_t + \pi_3 TO_t + \mu_t \tag{2}$$

Y is the Gross domestic product, OP represents the oil price, ER is the exchange rate, and TO is trade openness. Before estimating equation (2), we need to find the presence of cointegration, establishing equilibrium among the variables. Once cointegration exists, then we can proceed with the long-run estimations. Furthermore, the data for this paper are all sourced from the World Bank database from 1980 to 2020. Brent crude oil prices measure oil price volatility, and economic growth is measured by per capita gross domestic product, exchange rate is measured by the official exchange rate, and trade openness is measured by trade percentage of gross domestic product.

Results

The discussion of results begins by estimating the unit root test results using the ADF and PP methods and considering both constant and trend. This is to ascertain the level of stationarity of the variables. The unit root test results reveal that all the variables are stationary. While few of the variables are stationary at level, most are stationary at first difference.

Table 1: Cointegration test

Model	Critical bound test			
	F-stats	Lag	Significance Level	Unrestricted intercept
	4.03	3		1(0) 1(1)
			1%	3.65 4.66
			5%	2.79 3.67

After establishing the level of integration of the variables, a cointegration test that assess the equilibrium and long-run relationship of the variables was conducted. In this instance null hypothesis of no cointegration $\alpha_{1-4} = 0$ was tested against the alternative hypothesis $\alpha_{1-4} \neq 0$. The result as presented in Table 1 shows that equilibrium and long-run relationship exist among economic growth and the explained variables namely: oil price volatility, official exchange rate and trade openness. As such, we reject the null hypothesis and accept the alternative hypothesis. The existence of cointegration is justified by the presence of F-statistics

(4.03) which is greater than the upper bound critical value (3.67) at conventional 5% level of significance.

After establishing the equilibrium relationship among the variables, the short-run, long-run, and diagnostic test results are presented in Table 2. The result of the short-run shows that oil price volatility has a negative and significant effect on economic growth. This result is intuitive, especially for countries like Nigeria, which heavily depend on crude oil as its main source of foreign exchange earnings and revenue to the government. Oil price shock during the short-run, such as the one that took place during the COVID-19 period, where oil price fell to \$20 per barrel, has affected the fiscal condition of most countries, especially oil-dependent economies.

The result, as evidenced by the coefficient of error-correction term, revealed persistence in convergence to equilibrium after an initial oil price shock. This finding corroborates existing empirical works (Elmi and Jahadi, 2011; Nwonu, 2017; Nwoba *et al.*, 2017). However, trade openness was found to be significant and positively impacting economic growth in the short run, while the impact of the exchange rate was neutral in the short run. The implication of this finding is that if the government continues to rely on oil as its main source of income, short-term shocks will lead to a fiscal deficit that will take a long time for the economy to recover.

Furthermore, the long-run result presented in the middle of Table 2 shows that oil price volatility has a positive and important effect on economic growth in the long run. Although this result differs from the short-run result, the outcome is practically intuitive. Most economies that depend on crude oil tend to develop resilience of oil price shock during the long run. This is achieved by reducing over-dependence on oil as the main source of revenue by diversifying the economy from its monocultural nature. In the case of Nigeria, the oil price shock during the COVID-19 era has made the government develop an Economic Sustainability Plan that aims to revitalize the economy through various stimulus packages targeted at small and medium enterprises of various sectors of the economy. This includes the agricultural, manufacturing, construction, ICT, and energy and power sectors, among others. This result is in agreement with recent empirical findings (Foudeh, 2017; Bediako, 2018; Folajimi *et al.*, 2019).

Table 2: Results of short-run, long-run, and diagnostic tests

Dependent Variable = Y		
Regressors	Coefficients	T-statistics (p-value)
Long-run results		
lnOP	0.384	10.619 (0.000) ***
lnTO	0.033	0.474 (0.639)
lnER	-0.057	-1.041 (0.307)
Constant	6.272	14.676 (0.000) ***
Short-run results		
D(lnOP)	-0.080	-3.607 (0.001) ***
D(lnTO)	0.064	4.166 (0.000) ***
D(lnER)	0.006	0.425 (0.674)
ect _{t-1}	-0.225	-4.800 (0.000) ***
Diagnostic tests		
Serial Correlation	0.975 (0.216)	
Normality	0.009 (0.996)	
Heteroscedasticity	6.198 (0.798)	

Note: ***, **, * indicate 1%, 5%, and 10% significance level respectively. Values in parenthesis are *p*-values while ln indicates logarithm.

However, neither exchange rate nor trade openness was found to influence economic growth in the long run. The implication of these findings for policy purposes is that an economy like Nigeria that depends heavily on oil as its main source of revenue will continue to experience oil price volatility shock in the short run until the economy is fully diversified in the long run when oil price shock will not lead to negative economic growth such as the one experienced during the second and third quarter of the year 2020.

Conclusion and policy implications

This paper investigates the connection between oil price volatility, economic growth and trade openness in Nigeria. Bound tests and regression were employed to estimate a dataset from 1980 to 2020. The findings show that oil price volatility negatively and significantly impacts economic growth in the short run. However, as the economy diversifies and becomes more resilient in the long run, the volatility of oil prices tends to positively impact economic growth. Trade openness was found to positively and significantly impact economic growth in the short run.

However, exchange rate and trade openness were found to have a neutral long-run impact on economic growth. The implication of these findings is that oil price volatility will continue to have a short-run effect on the economy that so much relies on oil as its source of foreign earnings. However, as the economy diversifies and builds other sectors, the economy will

become resilient to oil price volatility shock in the long run. Moreover, since the negative effect of oil price volatility is more prominent in the short run and dissipates during the long run, the study recommends that policymakers ensure the full implementation of the present government's economic recovery and growth plan. Finally, based on the findings from the control variables, policymakers should pay more attention to the lingering problem of exchange rates in the country to harness the benefits associated with trade.

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