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Impact of Agricultural Output on Standard of Living in Nigeria (1970-2016)

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Abstract

This study investigated the impact of agricultural output on standard of living in Nigeria via crops, livestock, forestry and fishery. Agricultural output is expected to be the bane of improved welfare of Nigerians as a result of many resources allocated to the sector through government policies. But despite government efforts in the sector, it is still characterized with low yields and limited areas under cultivation. In view of this, secondary data were obtained from CBN statistical bulletin from 1970-2016 and analyzed using cointegration and error correction model (ECM). It was found that standard of living is elastic with respect to crops, forestry, fishery and livestock output in the short and long run estimates. It suggests that standard of living's response to agricultural output in the short run is higher than the long run. Furthermore, standard of living adjusts towards its long run level with about 26% of the adjustment occurring in the first year. The study recommended, among other things, that more resources be allocated to agricultural sector, expansion be made in agricultural cultivation and training be conducted for farmers so that the impact of the sector can be felt on the living standard in Nigeria.

Key words: Nigeria; Agricultural output; Standard of living and Error correction model.

JEL Classification: I31, O13, P32

1. Introduction

The agricultural sector is a section of an economy that is primarily engaged in growing crops, raising animals, and harvesting fish and other animals from a farm, ranch, or their natural habitats for man's use. It has been defined as the production of food, livestock and purposeful tendering of plants and animals (Ahmed, 1993). Agriculture is the mainstay of many economies and it is fundamental to the socio-economic development of a nation. In the same view, Okolo (2004) described agricultural sector as the most important sector of the Nigerian economy which holds lots of potentials for future economic development of the nation as it had done in the past. Notwithstanding the enviable position of the oil sector in the Nigerian economy over the past three decades, the agricultural sector is arguably the most important sector of the economy.

Agriculture's contribution to the Gross Domestic Product (GDP) has remained stable at between 30 and 42 percent, and employs 65 percent, of the labour force in Nigeria (Emeka 2007). Agriculture resource has been an important sector in the Nigerian economy in the past decades, and is still a major sector despite the oil boom; basically it provides

employment opportunities for the teeming population, eradicates poverty and contributes to the growth of the economy (Oji-Okoro, 2011).

Nigeria is grossly endowed with abundant natural resources including biological and non-biological resources. The pervasive influence of agriculture on Nigeria's economic and social development has also been articulated by Oluwasanmi (1966). A strong and efficient agricultural sector would enable a country to feed its growing population, generate employment, earn foreign exchange and provide raw materials for industries. The agricultural sector has a multiplier effect on any nation's socio-economic and industrial fabric because of the multifunctional nature of agriculture (Ogen, 2007).

The significance of agriculture in bringing about economic growth and sustainable development of a nation cannot be underestimated. Agriculture contributes to the growth of economy, provides employment opportunities for the teeming population, export revenue earnings and eradicates poverty in the economy. Abayomi (1997) stated that stagnation in agriculture is the principal explanation for poor economic performance, while rising agricultural productivity has been the most important concomitant of successful industrialization.

Generally, there are four major ways in which the agricultural sector contributes to development of the economy. These ways are product contribution, factor contribution, market contribution and foreign exchange contribution (Kuznetz 1961; Mackie 1964; Abayomi 1997; Abdullahi 2002; World Bank 2007).

Manyong (2005) noted that various literature have reported that in spite of Nigeria's rich agricultural resource endowment, there has been a gradual decline in contribution of agriculture to the nation's economy. In the 1960s, agriculture accounted for 65% - 70% of total exports; it fell to about 40% in the 1970s, and crashed to less than 2% in late 1990s. The decline in the agricultural sector was largely due to rise in crude oil revenue in the early 1970s.

Funding of agriculture especially in rural areas where the bulk of farmers live have also brought a lacuna in accelerating socio-economic development via agriculture. For instance, in spite of the importance of loan in agricultural production, its acquisition is fraught with a number of problems. The small scale farmers are forced to source for capital from relations, moneylenders and contribution clubs (Izekor & Alufohai, 2010). All of these are known to be ineffective in providing capital for substantial increase in agricultural production.

In addition, a rise in rural purchasing power as a result of the increase in agricultural surplus is a great stimulus to industrial development. The market for manufactured goods is very small in an underdeveloped country like Nigeria.

Less than 50% of Nigeria's cultivable agricultural land is under cultivated. The peasant, smallholder and traditional farmers who uses undeveloped production techniques, with resultant low yields, cultivate most of this land. These farmers are constrained by many problems including those of poor access to modern inputs and credit, poor infrastructure, inadequate access to markets, land and environmental degradation, inadequate research and extension services and inability to capture the financial services requirements of farmers

and agribusiness owners who constitute about 70 percent of the population is inclusive (Lawal, 2011).

In an attempt to bridge the gap between the benefits and challenges associated with Nigerian agricultural sector, emphasis will be placed on its impact on standard of living from 1970-2016 and hence, this form the basis for this study. The objective of this study is to analyze the contribution of the agricultural sector to the standard of living in Nigeria between 1970 and 2016. Thus, other specified objectives include to: determine the trends in standard of living in relation to agricultural output; examine the extent to which agricultural output has impacted on the standard of living; assess the distinction between short run and long run relationships of agricultural output and standard of living and identify the challenges of agricultural output and standard of living in Nigeria.

The identified relevance of agricultural resources to national economic growth in the past and the fast-declining contribution of this important sector due to myriads of challenges remain a problem to be solved which therefore calls for further study.

2. Literature Review

This section tries to look at the theoretical framework, empirical review, agricultural output and standard of living

2.1 Theoretical Framework

Todaro and Smith (2003), while looking at Lewis theory of development, assume that the underdeveloped economies consist of two sectors. These sectors are the traditional agricultural sector characterized by zero marginal labour productivity and the modern industrial sector. The primary focus of the model is agricultural production and its influence on economic growth. Todaro and Smith (2003) argued further that, if economic growth is to take place and become self-sustaining, it will have to include the rural area in general and the agricultural sector in particular.

Development economists such as Smith in *The Wealth of Nations* (1776) and Ricardo in *The High Price of Bullion, a Proof of the Depreciation of Bank Notes*, (1810), have focused on how agriculture can best contribute to overall economic growth and modernization.

The physiocrats such as Quesnay and Marx laid more emphasis on agriculture in the growth of an economy. In their views, the development of an economy depends on the growth of the agricultural sector. The source of national wealth is essentially agriculture. They believe that the fate of the economy is regulated by productivity in agriculture and its surplus is diffused throughout the system in a network of transactions. The agricultural sector, to the physiocrats, is the only genuinely productive sector of the economy and the generator of surplus upon which all depends.

Quesnay believed that the wealth of nations was derived solely from the value of agriculture. Quesnay's understanding of value-added was rather primitive—he could not see, for example, how manufacturing could create wealth. Farmers, on the other hand, could. As Karl Marx explains in *"Das Kapital"*, "the Physiocrats insist that only agricultural labour is productive, since that alone, they say, yields a surplus-value". The physiocrats ideology on agriculture formed the basis for the research work

2.2 Empirical Review

Rostow (1960) as cited in Oji-okoro (2011) argued that in the process of economic development, nations pass through several stages namely: traditional stage, the precondition for take-off, the take off stage, drive to maturity and the high mass consumption stage. Agriculture plays crucial roles in the first three stages (Traditional society, pre-conditions for take-off and take-off stages). The agricultural sector has the potential to be the industrial and economic springboard from which a country's development can take off. Indeed, more often than not, agricultural activities are usually concentrated in the less- developed rural areas where there is a critical need for rural transformation, redistribution, poverty alleviation and socio-economic development (Gokal & Hanif, 2004).

Tombofa (2004) reported that the state of agriculture is of paramount importance to the development process. He pointed out that agriculture provides the basis for the world's great civilization in the past and increase in agricultural productivity in England laid the basis for, and sustained the first industrial revolution. The agricultural sector is known to employ over 75 percent of the labour force in developing countries and provide the purchasing power over industrial goods.

The Western countries' experiences on economic development were seen as requiring a rapid structural transformation of the economy focused on agricultural activities to a more complex modern industrial and services society. As a result, agriculture's primary role is to provide food and manpower to the expanding industrial economy (Kamil, Sevin, & Festus, 2017)..

Oji-Okoro (2011) employed multiple regression analysis to examine the contribution of agricultural sector on the Nigerian economic development. He found that a positive relationship between Gross Domestic Product (GDP) vis a vis domestic saving, government expenditure on agriculture and foreign direct investment between the period of 1986 - 2007. It was also revealed in the study that 81% of the variation in GDP could be explained by Domestic Savings, Government Expenditure and Foreign Direct Investment.

In any economy, successful economic development depends on open balanced interaction between various sectors over a period of time, often the process of interaction is such that some sector becomes more important than others, depending on the level and the stage of development. In Nigeria, Agriculture is an example of one key sector whose role is, and would remain crucial to development fortunes. Economic history is replete with ample evidence that agricultural revolution is a fundamental pre-condition for economic growth, especially in developing countries (Woolf and Jones, 1969; Oluwasanmi, 1966; Eicher and Witt, 1964).

Izekor and Alufohai (2010) studied public expenditure in agricultural sector using econometric analysis. Based on their report, agricultural financing in Nigeria has a positive relationship between interest rate and loanable funds on the level of Agricultural output. The strong correlation that has been established between Nigerian's total GDP and agriculture suggests that the prospects of the nonoil sub-sector and the overall economy are closely tied to the performance of the agricultural sector. Eze, O. M. (2017) submits that in the 1960's, agriculture contributed up to 64% to the total GDP but gradually declined in the 70's to 48%

and it continued in 1980 to 20% and 19% in 1985, this was as a result of oil glut of the 1980's (Binuyo, 2014).

Iganiga and Unemhilin (2011) studied the effect of federal government agricultural expenditure and other determinants of agricultural output on the value of agricultural output in Nigeria. A Cobb Douglas Growth Model was specified that included commercial credits to agriculture, consumer price index, annual average rainfall, population growth rate, food importation and Gross Domestic Product (GDP) growth rate. The study performed a comprehensive analysis of the data and estimated the Vector Error Correction Model. Their results showed that federal government capital expenditure was found to be positively related to agricultural output.

Using time series data, Lawal (2011) attempted to verify the amount of federal government expenditure on Agriculture in the thirty-year period of 1979 – 2007. Significant statistical evidence obtained from the analysis showed that government spending did not follow a regular pattern and that the contribution of the agricultural sector to the GDP was in a direct relationship with government funding to the sector.

The business cycle theories stress that if there is insufficient consumption and unstable investment, this can bring about fluctuations in output and unemployment; and that in a digressed economy where savings and investment are determined by other factors industry interest rates, a way out is to stimulate demand. According to Keynes, this could be achieved through government intervention. Agricultural sector is critical for both overall economic growth and reduction of poverty in a typical African country (Omorogbe, Jelena, & Fatima, 2014).

The performance of African agriculture over the last three or four decades has not been particularly robust (Townsend, 1999; FAO, 2003). The sector experienced very low rates of growth in the 1970's, but the growth rates increased somewhat during the 1980s and 1990s. In particular, real annual average agricultural Gross Domestic Product (GDP) growth rose from 1.1% in the 1970s through 2.3% in the 1980s to 2.5% in the 1990s. In spite of this upward trend in the growth of African agriculture, per capita agricultural growth has been low or negative over much of this period (Oluwafemi, Adedokun, Ogunleye, & Oladokun, 2015).

Africa has continued to lag behind other developing-countries/regions and has remained the only region with agriculture growing at a rate that is below the overall population growth rate. There is evidence of steady, although gradual, improvement in the domestic policy environment of agriculture in Africa, with particular relevance to the export crop sub sector, since the mid 1980s (Oyejide, 1993; World Bank, 1994; Townsend, 1999; FAO, 2003).

Essien (2005) in his studies also stressed the point that more countries of the world have undertaken one form of economic reform or another at a time in their history. The goals of these reforms may differ from country to country; nevertheless, they are all closely aligned towards putting their economies on a path of sustainable growth and development. In developing economies such as Nigeria, such reforms have characterized the development strategy. In recent times and in virtually all cases, structural weaknesses in the economy,

high debt service burden, spatial and sectoral unevenness and poor growth performance have been some of the most compelling reasons for their implementation.

The recent reform by the Nigeria government is the (NEEDS). In this new reform there is strong emphasis on the agricultural development. The emphasis on agriculture is predicated on the fact that before the advent of crude oil, agricultural production was the mainstay of the Nigerian economy and about 70 per cent of the working population made their living from agriculture. It has also accounted for 35 per cent of the country's Gross Domestic Product (GDP) in the last 5 years. Consequently, increasing agricultural output is necessary if Nigeria is to attain the Millennium Development Goals (MDGS) of eradicating extreme poverty.

Omanukwe (2005) pointed out that agriculture has become a complex activity, more so in the light of dynamic changes and innovations that have pervaded the global economy. In a developing economy like Nigeria, this becomes much more challenging given the desire and need to compete both domestically and internationally (Abolagba et al., 2010)

Studies from empirical literature from the works of Oji-Okoro (2011), Ogwuma (1981), Iganiga and Unemhilin (2011), Lawal (2011), Essien (2005) and Olutoye and Olutoye (2014) tried to establish a relationship between agricultural output and economic development or growth in Nigeria, but none of these studies to best of the literature reviewed had carried out an investigation on the relationship between agricultural output and standard of living. For instance, the work of Olutoye and Olutoye (2014) which was similar to this study tried to assess the relationship between agricultural output (Crop Production Output, Livestock Output, Forestry Output and Fishery Output) and economic growth in Nigeria (1990-2013), but differ as this study investigates the relationship between standard of living and agricultural output (from 1970-2016); Olutoye and Olutoye (2014) utilized a simple linear regression model, while this study adopted cointegration and error correction model.

2.3 Output

Agricultural output: According to the Organisation for Economic Co-operation and Development (OECD) (2017), agricultural output entails the total output from livestock; forestry, fishery and crop production. It is derived from the basic definition of agriculture as the cultivation and breeding of animals, plants and fungi for food, fiber, bio-fuel, medicinal plants and other products used to sustain and enhance human life. Agricultural output comprises of output sold (including trade between agricultural holdings); changes in stocks; output for own final consumption; output produced for further processing by agricultural producers; and intra-unit consumption of livestock feed products.

Agriculture is defined as the production of food, feed, fiber and other goods by the systematic growing and harvesting of plants and animals for human use. Akinboyo (2008) defines agriculture as the science of making use of land to raise plants and animals. It is the simplification of nature's food webs and rechanneling of energy for human, plant and animal consumption.

Agricultural output in this study is defined as total output from crop production, forestry, fisheries and livestock.

2.4 Standard of living

Kalra (2006) defines standard of living as the sum of necessities, comfort and luxuries that an individual enjoys at a particular time. It depends primarily on income. People and nations with high income enjoy high level of standard of living. It is generally measured by standards such as real income per person, poverty rate, access to quality healthcare, income growth, inequality and education standards. It is the ease by which people living in a place at a particular time are able to satisfy their wants.

Zapf (2002) conceptualized standard of living as the sum (total) of individual, household and societal welfare. However, his notion of welfare is synonymous to material level of living (or wealth) and rates of economic growth as measured by GDP or GNP per capita. The idea of wealth as a primary goal of societal development was eventually broadened to include qualitative aspect of welfare development and quality of life become the leading welfare paradigm and societal goal (Berger-Schmitt & Noll, 2000).

In addition, a helpful taxonomy of welfare concepts was provided by Zapf (2002). It combined both objective and subjective measures at individual and societal level. Thus, the taxonomy is given below:

Table 2.1 Taxonomy of welfare concepts

Items	Objective indicators	Subjective indicators
Individual level	Objective living condition (e.g. income)	Subjective wellbeing (income satisfaction)
Societal level	Quality of society (income distribution)	Perceived quality of society (can that between rich and poor)

Source: Zapf (2002)

The taxonomy above provides three approaches to measuring welfare namely: the objective level of living, the American subjective well-being and the combined approach (the objective and subjective measures)

Investopedia LLC (2014) describes standard of living as the level of wealth, comfort, material goods and necessities available to a certain socio-economic class in a certain geographical area. It includes factors such as income, quality and availability of employment, class disparity, poverty rate, quality and affordability of housing, hours of work required to purchase necessities, gross domestic product, inflation rate, number of vacation days per year, affordable (or free) access to quality healthcare, quality and availability of education, life expectancy, incidence of diseases, cost of goods and services, infrastructure, national economic growth, economic and political stability, political and religious freedom, environmental quality, climate and safety.

In addition, standard of living is often used to compare geographical areas or a particular area in a distinct point in time. The gross national income per capital is commonly used in measuring standard of living. One limitation of measuring standard of living is that it does not take into account some factors such as crime rate or environmental impact.

Standard of living is a core concept defined as the advancement in human well-being and the success or failure of nations. Standard of living itself is usually treated as synonymous with officially measured real GDP (or real consumer spending) per capita (Johansson, 1973)

Kuznets (1941) defined standard of living as it is measured by GDP per capita, life expectancy at birth, and a composite measure of education based on literacy and school enrollment. It also includes human rights in broad measurement of human development.

This study defines standard of living as the sum or total of necessities and comfort individual or group of individuals enjoys from a nations income (GDP per capita). It is measured by the rate of goods and services produced in a country.

3. Methodology and Model Specification

This study used time series data to analyze the relationship between standard of living and agricultural output. The econometric techniques include: Augmented Dickey–Fuller (ADF) to test for a unit root in the individual data series (Dickey & Fuller, 1981); a Regression Analysis to establish a long run relationship between dependent and independent variables; Cointegration test to determine whether the variables enter into a long term relationship. The technique is adopted to find out the cointegration in error term; and ECM estimate of the model is to establish a short run relationship between dependent, independent variables and error term (residual) (Engel & Granger, 1987). The major source of data to this study was secondary source, that is, data on agricultural output (Crop Production Output, Livestock Output, Forestry Output and Fishery Output) and GDP per capita would be obtained for a period of forty-six years (1970-2016) from Central Bank of Nigeria statistical bulletin and periodicals. Thus, the basic model for this study is:

$$LNSOL = f(OCP, OFS, LNOFSH, LNLOS) \dots\dots\dots 1$$

Where:

SOL = Natural log of Standard of Living (proxied by GDP per capita)

f = Function

OCP = Crops Output

OFS = Forestry Output

OFSH = Natural log of Fishery Output

LOS = Natural log of Livestock Output

Rewriting the model from equation (1) above in a linear form, we obtain:

$$LNSOL_t = \beta_0 + \beta_1 OCP_1 + \beta_2 OFS_2 + \beta_3 LNOFSH_3 + \beta_4 LNLOS_4 + \epsilon_t \dots\dots\dots 2$$

Where:

β_1 to β_4 = Slope Coefficient

β_0 = Intercept

ϵ_t = Stochastic or Error Term in Time t.

A priory expectation

$\beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 > 0, \beta_5 > 0$

That is, if OCP, OFS, LNOFSH and LNLOS increases SOL will also increase.

3.1 Test for Stationarity

The mathematical expression of ADF test amongst the series is given as:

$$\Delta X_t = \alpha_0 + \alpha_1 X_{t-1} + \sum_{i=1}^n \alpha_i \Delta X_{t-i} + \varepsilon_t \dots\dots\dots 3$$

Where:

- ΔX_t = The first differenced value of a measure of the series.
- α_0 = Estimated constant parameter or intercept.
- α_1 = Estimated parameter of the first level lag value of series
- X_{t-1} = First level lag value of series
- α_i = Vector of the estimated parameters of the lagged values of the differenced value of series.
- ΔX_{t-1} = Vector of the lagged values of the differenced value of a series.
- ε_t = Error term.

The ADF test is conducted to test the order of integration of each variable and to establish whether they are non-stationary and how many times the variables need to be differentiated to get a stationary series before running the regression. In time series analysis, unit root test helps in determining the stationary of a series and one of the most commonly used test in the literature to ascertain the stationarity level of series are the ADF test developed by Dickey and Fuller (1979) which is an improvement of the original ADF test.

3.2 Regression Model

$$LNSOL_t = \beta_0 + \beta_1 OCP_1 + \beta_2 OFS_2 + \beta_3 LNOFSH_3 + \beta_4 LNLOS_4 + \varepsilon_t \dots\dots\dots 4$$

The regression model above is to establish a long run relationship between the dependent and independent variables.

3.3 Cointegration Test

$$\varepsilon_{t-1} = LNSOL_t - \beta_1 OCP_1 - \beta_2 OFS_2 - \beta_3 LNOFSH_3 - \beta_4 LNLOS_4 - \beta_0 \dots\dots\dots 5$$

The study employed cointegration test to determine whether the variables enter into a long term relationship. The technique is adopted to find out the cointegration in error term. Cointegration among variables is very important, especially when each variable taken separately is non-stationary but some linear combination of the variables are stationary (Engel & Granger, 1987). Where: ε_{t-1} = error term

3.4 Error Correction Model

$$\Delta LNSOL_t = \beta_0 + \beta_1 \Delta OCP_{t-1} + \beta_2 \Delta OFS_{t-1} + \beta_3 \Delta LNOFSH_{t-1} + \beta_4 \Delta LNLOS_{t-1} + \beta_5 EC_{t-1} + \varepsilon_t \dots\dots\dots 6$$

Where:

- Δ = Is the first difference operator
- $\alpha_5 EC_{t-1}$ = Error correction model. It reflects the short run dynamics of the model. It measures the speed with which short run equilibrium adjust to the long run equilibrium. However, it is expected to have a negative sign.

The error correction model (ECM) is adopted to establish a short run relationship between the dependent, independent variables and error term (residual). The justification for ECM is that, it distinguishes between short run and long run responses and it allows direct estimation of the speed adjustment towards long run.

4. Results and Discussion

Table 4.1: Augmented Dickey–Fuller Stationarity Test Results

Variables	At levels		At First Differences		Remarks
	ADF test Stat	Order of integration	ADF test Stat	Order of integration	
LNSOL	5.333290	I(0)	-2.602429	I(1)	Stationary*
OCP	3.815360	I(0)	-4.515027	I(1)	Stationary*
OFS	3.032594	I(0)	-4.874361	I(1)	Stationary*
LNOFSH	1.527812	I(0)	-5.138322	I(1)	Stationary*
LNLOS	4.451680	I(0)	-2.198429	I(1)	Stationary*
Note	Critical Value		Critical Value		
	1% = -2.616203		1% = -2.617364		
	5% = -1.948140		5% = -1.948313		
	10% = -1.612320		10% = -1.612229		

Source: Researchers' estimation using E-Views software

Note: * indicates 5% level of Significance

Table 4.1 shows the result of the stationarity test for each of the variables modeled in the equation. It can be observed that the presence of a unit root was sustained at first difference from the values of ADF statistics, since in absolute values are greater than the critical value 5% levels of significance. Thus, the ADF was tested without trend and intercept and the result showed that all the variables were stationary at first difference. The unit root test showed that the variables are integrated in the order of one, I(1). Thus, the combination of series integrated of the same order are said to be cointegrated and therefore, the null hypotheses were rejected.

Table 4.2: Regression Result of the Model

Dependent Variable: LNSOL				
Variable	Coefficient	Std Error	T-Stat	Prob
C	-13.97194	1.619161	-8.629124	0.0000
OCP	-0.000408	3.59E-05	-11.36773	0.0000
OFS	0.007666	0.003191	2.402653	0.0208
LNOFSH	1.238975	0.264873	4.677615	0.0000
LNLOS	3.348721	0.158233	21.16322	0.0000

$R^2 = 0.98$; F-Stat = 449.03; DW = 0.95

Source: Researchers' estimation using E-Views software

The long run estimate of the variables in Table 4.2 is statistically significant with positive signs except OCP. The coefficient of the constant has a negative sign with a value of -13.97194. The estimate also shows that OCP, OFS, LNOFSH and LNLOS are statistically significant. From the estimates, a unit change in OCP reduce standard of living by approximately -0.000408 values. The result also indicates that OFS is statistically significant and has a positive sign, suggesting positive relationships between OFS and standard of living. A percentage increase in OFS leads to approximately 8 percent increase in standard of living. Furthermore, the estimation revealed that LNOFSH is statistically significant. A

percentage increase in LNOFSH causes the standard of living to rise by approximately 123 percent. Finally, the value of LNLOS has a significant positive influence on standard of living. A percentage increase in LNLOS leads to an increase in standard of living by approximately 343 percent.

The results also show that the explanatory variables account for approximately 98 percent variation (given by the value of $R^2 = 0.98$) in standard of living in Chanchaga Local Government Area of Niger State. The F-statistics of 449.03 is significant at 1% probability level. The Durbin-Watson value of 0.95

Table 4.3: Result of Cointegration Regression

Variable	Coefficient	Std Error	T-Stat	Critical Value (0.05)
ε_{t-1}	-1.151053	0.150316	-7.657551	-1.948313

Source: Researchers' estimation using E-Views software

Results of cointegration regression in Table 4.3 indicate a rejection of the null hypothesis which states there is no cointegration in residual. This suggests the acceptance of alternative hypothesis, that there exists cointegration in the long run relationships among the series as captured by the significance of the residual regression. The value of the t-statistic -7.657551 is greater than its critical value -1.948313 at 5% level of significance in absolute terms. This implies that there is evidence of cointegration among the variables in our model and that long run relationships exist between the dependent and independent variables. In addition, the explanatory variables can adequately capture all the permanent innovations in the development of agricultural output over our sampled period.

The diagnostic tests in Tables 4.4 suggest that the data fits the model very well. This is because there is no evidence of any diagnostic problem; like serial correlation, non-normality and heteroscedasticity. This therefore suggests that the statistical properties of the model are generally satisfactory. From the dynamic model, the estimated error correction term is indicating an averagely high annual speed of adjustment of about 26% per annum.

In summary, the variables of this study, that is, LNSOL, OCP, OFS, LNOFSH and LNLOS have a long-run relationship amongst them for the period 1970 to 2016 in Nigeria. This is consistent with the study of Oji-Okoro (2011). OCP, OFS, LNOFSH and LNLOS have a positive relationship with LNSOL and significantly influence LNSOL in Nigeria.

Table 4.4: Error Correction Model Result

Dependent Variable: Δ LNSOL				
Variable	Coefficient	Std Error	T-Stat	Prob
EC_{t-1}	-0.257548	0.082353	-3.127356	0.0033
Δ OCP	-3.72E-05	5.27E-05	-0.705846	0.4844
Δ OFS	-0.000600	0.003729	-0.160959	0.8729
Δ LNOFSH	0.240219	0.246002	0.976494	0.3347
Δ LNLOS	0.105565	0.421641	0.250366	0.8036
Constant	0.187819	0.043124	4.355316	0.0001
Diagnostic Tests				

Dependent Variable: Δ LNSOL				
Variable	Coefficient	Std Error	T-Stat	Prob
Tests	Statistics			Prob.
R-Square	0.209525			
DW-stat	1.909277			
LM test	0.9424			0.8734
ARCH test	1.434982			0.9204
Jacque-Bera	7.053769			0.029396

The findings of this study gain support from the studies of Ogwuma (1981), Iganiga and Unemhilin (2011), Lawal (2011) and Omanukwe (2005).

5. Conclusion and Recommendations

The findings of this study concluded that agricultural output (crops, livestock, fishery and forestry) have an effect on the standard of living in Nigeria with crops having a negative significance (-13.97) in the long run and short run and forestry having a negative impact in the short run. Both Fishery and livestock output have a positive impact in the long run and short run. The error correction term (ECM) was found significant with an adjustment coefficient of 0.26. as a conclusive result that reveals a long-run relationship amongst the variables of the study. The study therefore recommends the following:

Government should improve its budgetary allocation on agriculture in order to boost output in crop production. This will improve crop productivity thereby improving its negative impact to positive. Government is also advised to avoid inconsistencies in its agricultural policies and programmes; rather it should embrace stable, consistent and sustainable crop production policies as that would help to improve standard of living in the country. Appropriate incentives (such as improved seedlings) should be provided to farmers and ensure that there are conditions that permit them to respond to the incentives. This implies that there must be sound macro-economic policies that allow both trade in crop products and their supply to domestic market and an institutional and physical infrastructure that support broad-based change by facilitating access to land, rural finance and technical knowledge.

Government should provide funds to acquire sophisticated farm tools to sustain output from livestock, fisheries and forestry productions in a consistent manner. This will also help in sustaining living standard and as well improve national economy. Proper monitoring of fund should be made to these outputs so as to contribute significantly on living standard. There should also be provision and development of storage and marketing facilities to curtail wastage during glut and harvest period. Peasant farmers who live in rural areas and are major providers of food crops for the nation should adequately be catered for by making rural areas more conducive and habitable by provision of adequate infrastructural facilities such as good roads, drinkable water and electricity. Provision of these facilities will no doubt impact positively on crop productivity.

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Impact of Globalization on the Stock Market Growth in Nigeria (1981– 2016)

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Abstract

The study examined the impact of globalization on stock market growth in Nigeria from 1981 to 2016. The specific objectives were to identify the relationship that exist between foreign direct investment as well trade openness on stock market growth. Six explanatory variables were specified for this study based on theoretical underpinning. The study employed ordinary least squares technique and secondary econometrics test such as Augmented Dickey Fuller (ADF) unit root test , co-integration test, granger causality test while the model was estimated using the Vector Error Correction Model (VECM).The result of the analysis reveals that the coefficients of Trade Openness (TOP) and Exchange Rate had a positive linear relationship with Market Capitalization of the Nigeria Stock Exchange (MCAP) such that if the variables increase, then Nigerian Total Market Capitalization of the Nigeria Stock Exchange value (MCAP) will increase. The result also revealed that stock market growth in Nigeria is adequately explained by the variables used in the model for the period of 36 years (i.e.) from 1981 to 2016). Based on this, the study suggests for appropriate policy measures coordination that will have a good synergy with stock market growth in Nigeria.

Key words: Globalization, Stock market, Growth, Foreign Direct Investment, Trade Openness.

JEL Classification: F02, H54, O47

1. Introduction

Globalization is a contemporary economic and socio-political phenomenon that has elicited diverse interpretation and reactions, some of which are positive, while some are negative, depending on the context and situation of the perceiver. Globalization is a process of global economic, political and cultural integration. It has made the world become a small village; borders between countries have been broken down. The history of globalization goes back to the second half of the twentieth century, the development of transport and communication technology led to situation where national borders appeared to be too limiting for economic activity (Kotilainen, 2002). Ogundele (2005) viewed globalization as the process of international integration of goods, technology, labour, capital, individuals, organization,

institutions, that are implementing worldwide strategies which link and coordinate international activities on a global basis.

The Nigerian stock market which is a sub-set of the financial system that serves as the engine of growth in our modern economy. It is referred to as a capital market because it deals with long term financial instruments, and has been seen as an institution that contributes to the socio-economic growth and development of emerging and developed economies. The stock market provides a means through which local and foreign investments are undertaken by countries. The stock market is an avenue to encourage savings, help channel savings into productive investments. It mobilizes long-term debt and equity finance for investments in long-term assets. Stock markets also help in boosting the financial system as well as improving the economic growth of a country. It supplements traditional lending activities of the financial institutions such as banks by providing risk capital (equity) and loan capital (debt). By means of these instruments, the market is able to mobilize long-term savings and provide capital to investors to finance long-term investments thereby broadening ownership of productive assets (Daniel, 2004).

Undoubtedly, globalization has impacted economic variables to be determinants of stock market growth. The Nigeria stock market has been in existence for over half a century now and has become an integral part of the economy structure of the country.

But most developing nations are still far from reaping the benefits of globalization (Konyeaso, 2016). The functions of the stock market have in recent times been beset by a lot of problems. This has been due to social and institutional factors and other bottlenecks, which hindered its vibrancy and development (Gerald & Simon, 2014). The results from the previous studies on globalization on stock market growth have not been clear and conclusive. The inconclusive nature of these results has been attributed to several reasons, including the difficulty of measuring the real global variables, policies of capital accounts liberalization, and the issue of distortions in the foreign capital transaction, as well as exchange rate restrictions. Distortions in capital movement have been a major characteristic of developing countries like Nigeria.

The motivation for this study is to provide better understanding on the impact of globalization on stock market growth in a developing country like Nigeria. Several studies have been conducted on the impact of globalization and economic growth and also the impact of stock market on economic growth. This study therefore presented current and fresh empirical evidence on the direct impact of globalization and stock market growth in Nigeria.

The rest of the paper is organized as follows. Section two reviews the relationship between globalization and stock market growth. Section three dwells on the methodology for the empirical analysis. Section four reveals the empirical results and discussion. Section five provides conclusion and recommendations.

2. Literature Review

The concept of globalization is not a new phenomenon. The interaction between people in different parts of the world has been taking place for thousands of years. A very good example of this interaction is a Silk Road, which connected Asia, Africa, and Europe.

Philosophy, religion, language, the arts, and other aspects of culture spread and mixed as nations exchanged products and ideas. One important aspect of economic globalization is market integration. Stigler (1969) and Sutton (1991) explain that a market is the area within which the price of an asset tends to be uniform after allowing for different transportation costs, differences in quality, marketing, etc. This definition relates the price evolution in the long-run, although deviations may occur in the short-run. It is, therefore, an equilibrium relationship or long-run trend.

The economic variable which is price is therefore a key element in the process of market globalization and provides a suitable framework for testing market integration by looking at the price relationship of assets over time. The core variables to be used in this study include foreign direct investment and trade openness; Foreign direct investment is an investment made by an individual or a company (investor) in a country which is not the country of origin of the investor, in the form of either establishing business or acquiring business assets in the country. Griffin and Pustay (2007) regarded FDI as the ownership or control of 10 percent or more of an enterprise's voting securities or the equivalent interest in an unincorporated business. It represents a veritable source of foreign exchange and technological transfer, especially to a developing economy like Nigeria. It can be analyzed in terms of inflow of new equity capital (change in foreign share capital), re-invested earning (unremitted profit), trade and supplier's credit, net inflow of borrowing and other obligations from the parent company or its affiliates (Nwankwo, Ademola & Kehinde, 2013). Trade openness on the other hand is the removal or reduction of restrictions or barriers on the free exchange of goods between nations. This includes the removal or reduction of tariff obstacles, such as duties and surcharges, and nontariff obstacles, such as licensing rules, quotas and other requirements. The easing or eradication of these restrictions is often referred to as promoting free trade. It promotes a free trade marketplace. This allows goods to cross international lines without any regulatory barriers or their associated costs. This can make it more cost effective for those looking to import or export goods with other nations and, ultimately, may result in lower costs to consumers due to lower fees and additional competition (Investopedia.com).

Osmond, Ogwuru and Ajudua (2014) defined the stock market as an organized market which provides facilities to the government and private investors to raise long term loans to finance its expenditures and for expansion and modernization of industries. It also exists to offer platform where suppliers of capital can quickly and easily restore their liquidity. The stock market serves the purpose of capital mobilization and allocation of the nation's capital resources among various competing alternative uses. It supplies firms with fixed and working capital and finance medium term and long term borrowings of the federal, states and local governments. Thus, the stock market encompasses of institutions and mechanisms through which medium term funds and long term funds are pooled and made available to corporate entities and governments. Stock market makes use of different intermediaries such as brokers, underwriters, depositories etc. These intermediaries act as working organs of the stock market and are very important elements of stock market.

Toree and Schmuker (2007) found out that the growth of stock market is positively related to globalization. This work shows that reform and globalization of capital market increases

domestic market capitalization, trading and capital raising, increases in the chain of activity in international equity markets can contribute to the spread at least practices in corporate governance, accounting rules and legal traditions.

There have been recent studies on the impact of globalization on economic growth as well as the impact of stock market on economic growth however limited empirical studies have tested the impact of globalization on stock market growth.

Adebite (2002) deduced that capital market globalization empowers the intensification of international financial security market. Integration of stock markets leads to greater international portfolio capital flows and increases the risks of emerging markets to crisis. This implies that globalization through the stock market provides opportunity to domestic companies to access new sources of capital and at the same time expose both the fund-users to risk of globalization.

The study of Foluso (2014) who used ordinary least square (OLS) estimation technique revealed that globalization promotes regional and global integration of Nigeria stock market; trade liberalization had a significant positive impact on the growth of Nigeria stock market. She therefore advised that for the Nigeria stock market to attain growth, there is need to adopt modern information and communication technology. The growth of stock market is also tied to the adoption of new information and technology. New payment and settlement system should be adopted so as to attract new investor both domestically and internationally.

Gerald and Simon (2014), in their study indicates that injection of new capital into Nigeria capital market shows a statistically significant positive impact or effect on globalization of Nigeria economy. Based on the finding, the study recommended the establishment of an institution that will ensure that the capital market executive's director maintained the rules and regulations that guided the market for the interest of the shareholders and of the economy at large so as to boost the financial responsibility of customer.

Omodero, Cordelia and Ekwe (2016) studied the impact of foreign direct investment and stock market performances in Nigeria between 1985-2014, the results revealed that FDI has an insignificant impact on the economy and the macroeconomic variables that determine stock market performances. He therefore recommended policies that would encourage foreign firms operating in the oil and gas including the telecommunication and the agricultural sectors to be listed since it would go a long way in attracting more FDI, leading to improvement in the stock market performance. This should be complemented with policies that ensure stable macroeconomic environment.

The foregoing review of empirical studies indicated that the impact of globalization on stock market growth have been mixed, most of which have positively related. Hence this current study will, therefore, examine the impact of globalization on the growth of the Nigeria stock market for the period of 1981 to 2016.

3. Methodology

This research work relied on the use of secondary data, the sources of which includes publication from CBN Statistical Bulletin, International Monetary Fund and World Bank development Indicators.

3.1 Statement of Hypothesis

Ho: Globalization has no significant impact on stock market growth.

Hi: Globalization has a significant impact on stock market growth.

Model Specification

The following multiple regression model from the work of Foluso (2014) is adopted and improved upon in an attempt to determine the impact of globalization on stock market growth in Nigeria. Foluso's (2014) is improved in the sense that some variables which are of significant impact are added to the model such as trade openness, foreign debt, inflation rate, interest rate and exchange rate. The reason for this is to have a broad understanding from the estimation.

Thus, the model is stated as;

$$MCAP = f(FDI, TOP, FDT, INF, INT, EXT) \dots\dots\dots 1$$

Mathematically, this implicit functional relationship was specified in explicit stochastic linear form as thus:

$$MCAP = \beta_0 + \beta_1 FDI + \beta_2 TOP + \beta_3 FDT + \beta_4 INF + \beta_5 INT + \beta_6 EXT + \mu \dots\dots\dots 2$$

However, the Log Linear specification is specified as thus:

$$\text{LOG}(MCAP) = \beta_0 + \beta_1 \text{LOG}(FDI) + \beta_2 \text{LOG}(TOP) + \beta_3 \text{LOG}(FDT) + \beta_4 \text{LOG}(INF) + \beta_5 \text{LOG}(INT) + \beta_6 \text{LOG}(EXT) + \mu \dots\dots\dots 3$$

Where;

- MCAP=Market Capitalization of Stock Market
- FDI = Foreign Direct Investment
- TOP = Trade Openness
- FDT =Foreign Debt
- INF = Inflation Rate
- INT = Interest Rate
- EXT= Exchange Rate
- β_0 = intercept
- $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ = parameters
- μ = stochastic error term

3.2 Unit Root Tests

It is now a common practice to examine the time series properties of economic data as a guide to a subsequent multivariate modeling and inference. Therefore, this study will adopt the Augmented Dickey Fuller (ADF) unit root test to verify the unit root property of the series. All the variables in the model will undergo the ADF test.

3.3 Cointegration Test

This was used to investigate the existence of a long-term relationship between globalization and stock market growth. We shall explore existence of a long-term relationship among the variables in our model. If the variables that we are using in this research work are found to

be co-integrated, it will provide statistical evidence for the existence of a long-term relationship.

3.4 Vector Error Correction Model (VECM)

If cointegration has been detected between series we know that there exist a long term relationship between them so we apply the VECM in other to evaluate the short term properties of the cointegrated series. The error correction will be used to show the speed of adjustment of the variables to their long-term equilibrium. The error correction model coefficient is meant to tie the short-term disequilibrium of the error term to its long term value. The lag of error term by one period is the error correction mechanism (ECM) that measures the rate of adjustment of the variables from long run to short run (David, Noah & Agbalajobi, 2016).

4. Results and Discussion

This section shows the analysis of data, pre-estimation and post-estimation test results and discussion of the results in line with specific objectives and concludes with the comparison of the findings of the study with past empirical findings.

Table 4.1: Multiple Regression Result

Dependent Variable: LOG(MCAP)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-12.1239	2.1299	-5.6922	0.0000
LOG(FDI)	0.7577	0.1150	6.5839	0.0000
TOP	2.4464	1.2430	1.9680	0.0587
LOG(FDT)	-0.1043	0.1285	-0.8119	0.4234
INF	-0.0042	0.0063	-0.6613	0.5136
INT	-0.0937	0.0356	-2.6316	0.0135
EXT	0.0128	0.0043	2.9619	0.0060
R-squared	0.9731	Mean dependent var		5.7741
Adjusted R-squared	0.9676	S.D. dependent var		3.0115
S.E. of regression	0.5419	Akaike info criterion		1.7853
Sum squared resid	8.5171	Schwarz criterion		2.0932
Log likelihood	-25.135	Hannan-Quinn criter.		1.8927
F-statistic	175.3016	Durbin-Watson stat		1.8577
Prob(F-statistic)	0.0000			

Source: Authors' computation, 2018 from E-view

The result of the analysis as presented in table 3 above shows that, the coefficients of Foreign Direct Investment (FDI), Trade openness (TOP) and Exchange Rate has a positive linear relationship with Total Market Capitalization of the Nigeria Stock Exchange (MCAP). This implies that as Foreign Direct Investment (FDI), Trade Openness (TOP) and Exchange Rate increases by one percent, *ceteris paribus*, Nigerian Total Market Capitalization of the Nigeria Stock Exchange value (MCAP) will increase by 0.757, 2.446 and 0.012 percent respectively. The result is in line with initial expectation because theoretically, the sign of the coefficients are expected to be positive (i.e. directional relationship with that of aggregate Nigeria Stock Exchange value (MCAP). All other

variables remaining constant the value of Market Capitalization of Stock Exchange will decline by 12.123. Furthermore the coefficients of Foreign Debt (FDT), Inflation Rate (INF) and Interest Rate (INT) has a negative linear relationship with total Market Capitalization of the Nigeria Stock Exchange (MCAP). This implies that a percent change (increase) in Foreign Debt (FDT), Inflation rate (INF) and Interest Rate (INT) holding the effect of other variables constant will bring about change (decrease) in the total Market Capitalization of the Nigeria Stock Exchange value in Nigerian economy by 0.10, 0.004 and 0.09 percent respectively.

The constant is found to be statistically significant at five percent level of significance which implies that there are other variables that affect Market Capitalization (MCAP) in Nigeria apart from those captured in the course of this study but were not included.

4.1 Augmented Dickey Fuller Test Result

The result of the stationarity test of the time series data incorporated in the model as outlined in the previous chapter conducted using the Augmented Dickey-Fuller (ADF) test is presented below;

Table 4.2: ADF Test Result

Variable	ADF Test Statistics (Level)	ADF Test Statistic (First Difference)	5% Critical Value	Order of Integration
MCAP	-0.4818	4.3758	-2.9511	I(1)
FDI	-1.2543	-9.2340	-2.9511	I(1)
TOP	-2.2440	-7.8320	-2.9511	I(1)
FDT	-1.8801	-4.5455	-2.9511	I(1)
INF	-1.2543	-9.2340	-2.9511	I(1)
INT	-2.4028	-5.1336	-2.9540	I(1)
EXT	1.3201	-3.6443	-2.9511	I(1)

Source: Authors' computation, 2018

The results of unit root test are contained in Table 4.2 above and it reveals that all the time series variables (MCAP, FDI, TOP, FDT, INF, INT and EXT) are found to reject null hypothesis "no stationarity" at first difference I(1). This is because the ADF value of each of the variable is less than their respective McKinnon 5% critical values. Therefore all the variables (MCAP, FDI, TOP, FDT, INF, INT and EXT) are stationary at first difference i.e. integrated at order one.

4.2 Co-integration Test

The results of the Johansen co-integration test for the long run cointegrating relationship among the variables in the model is presented in table below.

Table 4.3: Johansen Cointegration Test Result

Included observations: 34 after adjustments
Trend assumption: Linear deterministic trend
Series: LOG(MCAP) LOG(FDI) TOP LOG(FDT) INF INT EXT
Lags interval (in first differences): 1 to 1
Unrestricted Cointegration Rank Test (Trace)

Hypothesized	Eigenvalue	Trace	0.05	Critical Value	Prob.**
No. of CE(s)		Statistic			
None *	0.8160	168.5676		125.6154	0.0000
At most 1 *	0.6844	111.0016		95.7536	0.0030
At most 2 *	0.5639	71.7853		69.8188	0.0345
At most 3	0.4205	43.563		47.8561	0.1194
At most 4	0.3595	25.011		29.7970	0.1610
At most 5	0.2362	9.8605		15.4947	0.2916
At most 6	0.0203	0.6984		3.8414	0.4033

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level

** denotes rejection of the hypothesis at the 0.05 level*

***MacKinnon-Haug-Michelis (1999) p-values*

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized	Eigenvalue	Max-Eigen	0.05	Critical Value	Prob.**
No. of CE(s)		Statistic			
None *	0.8160	57.5660		46.2314	0.0021
At most 1	0.6844	39.2162		40.0775	0.0623
At most 2	0.5639	28.2220		33.8768	0.2034
At most 3	0.4205	18.5513		27.5843	0.4500
At most 4	0.3595	15.1514		21.1316	0.2784
At most 5	0.2362	9.1620		14.2646	0.2729
At most 6	0.0203	0.6984		3.84146	0.4033

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

** denotes rejection of the hypothesis at the 0.05 level*

***MacKinnon-Haug-Michelis (1999) p-values*

Source: Authors' computation, 2018

From the Table 4.3 above the trace statistic of 168.5676, 111.0016 and 71.78537 clearly exceeds the critical values of 125.6154, 95.75366 and 69.81889 respectively at 95 percent confidence interval, hence, we are not accepting the null hypothesis and conclude that there is at least one cointegrating relationship and therefore, a long run equilibrium relationship exists among the variables. The eigenvalue test also supported this claim of long run equilibrium relationship among the variables. The maximum eigenvalue statistics of 57.56602 exceeds the critical value of 46.23142 at 95 percent confidence level, thus, we are not accepting the null hypothesis of no cointegrating relationships among the variables.

4.3 Presentation of Vector Error Correction Model Result

Table 4.4: Presentation of Short Run Error Correction Model Result

Dependent variable: $\Delta(\text{LOG}(\text{MCAP}))$				
Independent variables	Coefficient	Std. Error	t-Statistic	Prob.
$\Delta(\text{LOG}(\text{MCAP}(-1)))$	0.2552	0.1572	1.6238	0.1170
$\Delta(\text{LOG}(\text{FDI}(-1)))$	-0.1987	0.0803	-2.4726	0.0206
$\Delta(\text{TOP}(-1))$	0.2428	0.4657	0.5213	0.6067
$\Delta(\text{LOG}(\text{FDT}(-1)))$	-0.2628	0.0890	-2.9519	0.0068
$\Delta(\text{INF}(-1))$	-0.0017	0.0024	-0.6986	0.4912
$\Delta(\text{INT}(-1))$	-0.0027	0.0125	-0.2209	0.8269
$\Delta(\text{EXT}(-1))$	0.0095	0.0030	3.1812	0.0039
ECM(-1)	-0.3468	0.0743	-4.6651	0.0001
CONSTANT	0.2187	0.0600	3.6413	0.0012
R-squared	0.6009			
Adjusted R-squared	0.4732			
F-statistic	4.7058			
Prob(F-statistic)	0.0013			
Durbin-Watson stat	1.6712			

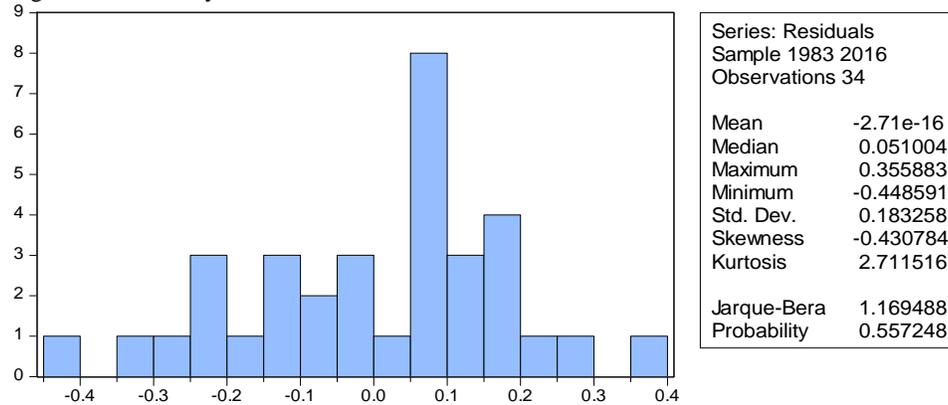
Source: Authors' computation, 2018

Table 4.5: Breusch-Godfrey Serial Correlation LM Test Result

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.871666	Prob. F(1,24)	0.3598
Obs*R-squared	1.191583	Prob. Chi-Square(1)	0.2750

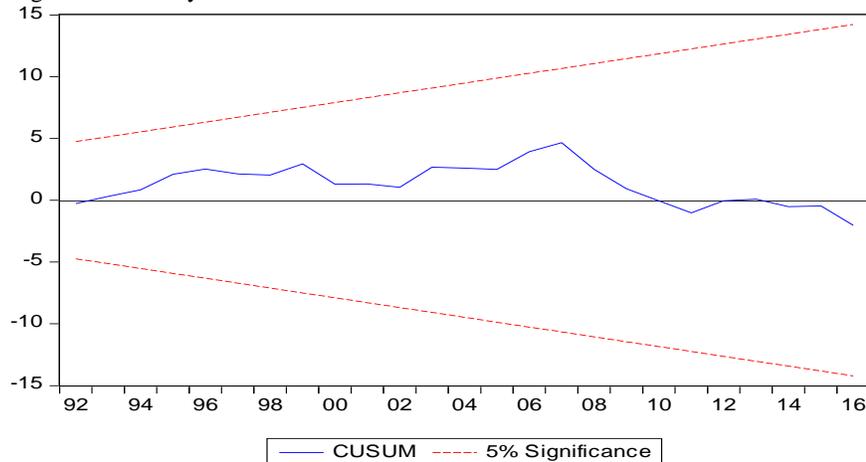
Source: Author's computation, 2018

Figure 1: Normality Test Result



Source: Authors' computation, 2018 from E-view

Figure 2: Stability Test Result



Source: Authors' computation, 2018 from E-view

Interpretation of Vector Error correction model (VECM) Result

The lag length is selected on the basis of Schwarz Info Criteria (SC). The short run analysis suggests that the estimated coefficient of the lagged error correction term ECM (-1) has the expected negative sign, it shows the speed of adjustment to long run equilibrium implying that 34.6% of disequilibrium within the model in the previous year is subsequently corrected in the current year.

Drawing from the VECM results, foreign direct investment was found to have a statistically significant negative relationship with stock market growth. The negative impact and effect is 19%. This implies that in the short run, *ceteris paribus*, an increase in foreign direct investment will have a negative effect on stock market growth. The result is not consistent with the apriori expectation that foreign direct investment is positively related to stock market growth. Trade openness was found to have an insignificant positive impact of 24% in the short run. This shows that in the short run, *ceteris paribus*, 1% increase in trade openness will lead to about 24% increase in stock market growth in Nigeria. This is however in consonance with the apriori expectation of the variable.

Foreign debt is found to have a negative impact on stock market growth with a positive elasticity effect of 26.28% implying that 1% increase in foreign debt holding the effect of other variables constant will lead to 26.28% decrease in stock market growth. This conforms to the sign expectation of the variable.

Further, in the result, inflation rate was found to have a negative effect on stock market growth. It shows that a percent increase in inflation rate holding the effect of all other variables constant will lead to about 0.1% decrease in stock market growth. This sign is in conformity with the apriori expectation.

Also, interest rate is found to have a negative impact on stock market growth. It shows that 1% increase in interest rate holding the effect of other variables constant will have a decreasing effect of 0.1% on stock market growth. This sign is also in conformity with the apriori expectation.

Exchange rate was found to be positive and significant in the short run with an impact of 0.9%. This shows that exchange rate contributes about 0.9% to the growth of stock market in the short run. This is also in consonance with the apriori expectation of the variable.

4.4 Discussion of Results

The focus of this study is economic globalization. Two major indicators of economic globalization were used by this study. They include foreign direct investment and trade openness. These two variables will be used to test or validate the hypothesis stated above.

As shown in the Table 4.1 above (multiple regression result), Based on the probability value of each of the variables, only the probability value (P-value) of FDI, INT and EXT were found to be statistically significant at five percent level. This ultimately implies that these variables (FDI, INT and EXT) contributes significantly to market capitalization and therefore are major determinants of growth of the stock market in Nigeria. The R^2 of the value of 0.9731 implies that 97.31% of total variation in the Market Capitalization was explained by Foreign Direct Investment (FDI), Trade Openness (TOP), Foreign Debt (FDT), Inflation Rate (INF), Interest Rate (INT) and Exchange Rate (EXT) i.e. the explanatory variables used in the study. The remaining 3% may be due to stochastic error term. Furthermore, the F-Statistics which is the joint test of significance of all parameter estimated in the model is statistically significant at 5% level as the p-value being 0.0000. With this result we reject the null hypothesis and conclude that the explanatory variables in the model are jointly significant in explaining market capitalization of Nigeria stock exchange. Thus globalization has significant impact on Nigeria stock market growth.

From the vector error correction model (VECM) result (Table 4.4), Using the t-statistics or the probability value of the variables to test the individual significance of Foreign Direct Investment (FDI) and Trade Openness (TOP), foreign direct investment was found to be significant (with p-value of 0.0206) while trade openness was found to be insignificant (with p-value of 0.6067).

Further, using the probability value of the F-statistics to test the joint significance of trade openness, foreign direct investment (globalization) and other control variables on market capitalization, it is found that the p-value (0.001314) is less than 0.05. Therefore, all the variables are jointly significant in explaining market capitalization of stock exchange in Nigeria.

Therefore, relying on the above, it is clear that globalization has a significant and negative impact on the stock market growth of Nigeria. Therefore, the study reject the null hypothesis and accept the alternative hypothesis and conclude that a significant and indirect relationship exist between globalization and stock market growth in Nigeria. Therefore in general, an increase in the globalization may lead to a significant decrease in stock market growth of Nigeria.

The result of the study deviates from past empirical studies on the variables used to capture globalization. The finding of the study differs from previous studies such as Foluso (2014) and Gerald *et al* (2014) that an indirect and negative relationship exist between globalization and stock market growth in Nigeria.

5. Conclusions and Recommendations

The study examined the impact of globalization on stock market growth in Nigeria between 1981 and 2016. The estimation techniques used are mainly descriptive and inferential analysis. Effort is made to capture the trend of market capitalization of Nigeria stock exchange (MCAP), Foreign Direct Investment (FDI), Trade Openness (TOP) and other variables included in the model. As part of the estimation technique used, the study employed the ordinary least squares (OLS), Augmented Dickey Fuller (ADF) unit root test to determine the stationarity level of the time series data variables of the model. Johansen test for cointegration was used to determine the long run relationship between the dependent and the independent variables of the model while vector error correction model was used to determine the short run dynamics of the relationship between globalization and stock market growth in Nigeria. The short run vector error correction model result shows that FDI as a proxy of globalization has a negative and significant impact on stock market growth in Nigeria. This shows that foreign direct investment into the country has been sufficiently inadequate to stimulate the growth of stock market. Trade openness was found to have a positive impact on stock market growth. Such impact however is statistically insignificant. This shows that though trade openness serves as a major determinant of stock market growth in the country, an increase in trade openness will lead to an insignificant increase in stock market growth.

Based on the findings, the study therefore provides the following recommendations: Government should invest more and develop the nation's infrastructure (such as roads, power, telecommunications (e.t.c) in order to create an enabling environment for businesses to grow, increase the productivity and efficiency, and the rate of returns of firms. This can be achieved through trade restrictions such as import duties, tariffs etc. Secondly, the study recommends the establishment of an institution that will ensure that the capital market executive director maintained the rules and regulations that guided the market for the interest of the shareholders and of the economy at large so as to boost the financial responsibility of customers. Finally, the findings of this study show that trade openness exerts positive but insignificant impact on stock market growth. Therefore, since no nation can develop in isolation, government should adopt adequate measures that will moderate trade relationships and encourage the level of trade openness that will not exert adverse effect on the Nigeria economy. This also prompts the conclusion that if exchange rate is properly managed may encourage and facilitate trade and other major aspects of globalization and therefore promote stock market growth of the country.

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Economic Recession and Operational Dynamics of Businesses in Molete Market, Ibadan Oyo-State

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Abstract

Economy is one of the basic social institutions that determine the condition of living of people within a given geographical entity. To this extent, studies have examined various aspects of the economy viz-a-viz the good, the bad and the ugly. One of the negative aspects of the economy that has attracted the attention of scholars is economic recession. To advance the frontier of knowledge on the dynamics of economic recession, this study examined the effect of economic recession on operational dynamics of business as experienced by traders in Molete market, Ibadan-Oyo State. To achieve this objective, the survey was adopted as the research design, all traders in Molete market constituted the study population, and two-stage sampling technique was used to select sample for the study. Both questionnaire and interview were utilized as instruments of data collection. Quantitative data were analyzed using descriptive and inferential statistical tools. Frequency count and simple percentage were used as descriptive statistical tools; regression analysis was adopted as the inferential statistical while verbatim quotation method was used to analyse qualitative data collected for the study. Findings of the study revealed that incidence of economic recession has devastating effects on business operational dynamics of the grassroot traders and by implications negatively affected their economic conditions and general livelihood. The study recommends that the Federal ministry of finance should add more to their effort of managing the country out of recession. This could be achieved by floating appropriate economic policies that will mitigate the effects of recession on the people, take the economy out of recession and prevent its further occurrence in the society.

Keywords: Business Flow, Economy, Purchasing Ability, Recession, Traders

JEL Classification: C61, J43, Q12

1. Introduction

Due to the nature of physical reality consisting of positive and negative extremes, experiencing negative economic experiences, otherwise known as economic recession is as old as the emergence of human civilization. For instance, the Biblical and Quranic story of Joseph regarding the incidence of economic recession after a period of progression in Egypt as foreseen in the king's dream is a reflection of the age long incidence of economic recession in human society. Furthermore, in the period (AD 235-284), the Roman Empire came close to collapse as a result of economic depression. Since this time onward nations have continually experienced economic recession in different shapes and sizes and the incidence has always left some negative effects on the people and human economic history generally.

Due to devastating effects of recession experience on people of a society and humanity in general, understanding the dynamics of economic recession has been one of the major interests of economists, political scientists and sociologists over time. For instance, economists have always put vested interest in understanding the economic causes and effects of recession and also devise mechanisms through which recession could be avoided or mechanisms through which it could be managed if it occurred. Traditional economic assumptions conceived of economic recession have been caused by several factors ranging from lack of optimum productivity which could be caused by lots of factors such as ineffective productive environment under-consumption, overproduction, inflation, loss of consumer confidence, etc. (Abberger & Nierhaus, 2008; Heinrich, 2013; Afe & John, 2017).

The world witnessed four global recessions since World War II as follows: 1975, 1982, 1991 and 2009 respectively, all of them lasted for a given period. The last witnessed in 2009 was tagged the strongest global recession human race had ever experienced and was the worst of the four postwar recessions given the number of countries affected, the period it lasted and the decline in real World Gross Domestic Product and per capital income (Liodakis, 2010). African countries are quite homogeneous in terms of the impact of this crisis and how deeply it affects them. Specifically on the financial side, the impact has been so pressing on most African countries. Apparently, Nigeria has been an economically giant neo-colonial state and incidence of recession in the world economy always has consequential effects on Nigeria's economy (Farabiyi, 2016). Specifically, in June 2016, Nigeria's economy was declared to be in recession and since then, there has been lots of hue and cry from all and sundry regarding recession experience from social, economic and political angles. According to Adegbite (2016), the economic recession in Nigeria at present depicts a long-term economic ill in the country manifested into a full-blown recession under the present government. The recession has affected the socio-political structures of the country such as its credit condition, general living standard, imports, production and employment as well as consumption demand of the people. It has resulted into many businesses and traders running into bad debt as they tried to balance between ends and means, resulting to insufficient funds to retain and proceed with their businesses and eventual bankruptcy.

Since the latest declaration of recession in the country, researchers have taken time to write on the causes and effects of it. From the social effects point of view, Adegbite (2016)

observed that economic recession has led to a situation whereby people were no longer capable to cater for their basic family needs thereby resulting into frictions among families, which may lead to long lasting damaged family relationships. It is important to note, at this juncture that, in addition to the little sociological studies that have been conducted on the reality of recent economic recession in Nigeria, very few studies have been directed towards empirical examination of the possible impact of recession on grassroot individuals who are more affected with problems associated with this economic recession. It is in line with this background that this study aimed at empirically examining direct experience of traders regarding incidence of economic recession especially as it affected their business operations using entrepreneurs in Molete Market, Ibadan as the case in point. This effort was necessary not just to cover the gap of insufficient research in the area, but also due to its tendency of advancing coast of sociological knowledge in the area and also because of its tendency of solving social problems relating to recession experience especially among grassroots indigenous people.

2. Literature Review

2.1 Economic Recession

The word economic recession is made up of two different terminologies: economic and recession. Economy is the total sum of products and services, transactions of value between two economic agents in a given geographical space, be it individuals, organizations or states (Adebayo, 1999). Alfred cited in Jhingan (2002) summarily conceived of economy as the ordinary business life of a people. Robbins cited in Karla (2006) sees the term as a science which studies human behaviour as a relationship between ends and scarce means which have alternative uses. Thus, economy could be described as that social institution that takes care of all issues relating to wealth acquisition, wealth distribution and wealth management in a given geographical space. Recession, on the other hand, is used to mean consistent retrogression in the movement of the economy of an individual, a group of people or a political state. According to Abberger & Nierhaus (2008), recession is a period of two quarters of negative GDP growth. Furthermore, they noted that recession is characterized by a significant decline in economic activities spread across the country, lasting more than few months, normally visible in real Gross Domestic Product (GDP) growth, real personal income, employment, industrial production, and wholesale-retail sales.

Economic recession can also be defined as a negative real Gross Domestic Product growth rate lasting for more than two consecutive quarters (first and second quarters) (Noko, 2016). Specifically, recession is marked by reduction in the following indicators: real GDP, income, employment, manufacturing and retail sales. Noko (2016) argued that recession is determined not only by negative real GDP growth rate alone, rather factors such as real personal income, employment, industrial production and characteristics of wholesale and retail sales are also major indicators of an impending recession even before the quarterly real GDP is out.

Claessens, Ayhan, & Marco (2008) argued that recession is a contraction in business cycle which is marked by a decline in certain macroeconomic indicators such as the GDP. Thus, GDP is taken as one major indicator used by economists to determine whether an economy is recessed or not. Although numerous definitions have been tendered for the term recession

or economic recession, Claessens, Ayhan & Marco (2008) opine that the general connotation of the term is that it refers to a period of decline in economic activity. In technical terms, an economy is deemed to be recessed if it grows by 2% in one quarter and then contracts by 0.5% in each of the next two quarters. Recession as an economic cankerworm has common characteristics all over the world; these characteristics include:

- i. They typically last about a year and with a resultant significant output cost. In particular, an economy in recession is usually associated with a 2% decline in GDP while a severe case of recession records close to 5% output cost.
- ii. Though the fall in consumption is often small, the industrial production and investment record much larger declines than that in the GDP.
- iii. They typically overlap with drops in international trade as exports and, especially, imports fall sharply during periods of slowdown.
- iv. There is a rise in unemployment rate with a slight fall in inflation rate due to drop in overall demand for goods and services. Along with the erosion of house and equity values, recessions tend to be associated with turmoil in financial market (Claessens, Ayhan & Marco (2008).

From the discussion thus far, economic recession could be described as a period of negative economic flow or trend in which an economic system experience a long or short decline or retrogression which invariably have some severe socio-economic consequences on the people wellbeing generally.

2.2 Types of Recession Based on shapes and magnitudes

Recession as an economic crisis can be categorized into two ways: shapes and magnitudes. Based on shape, the most common typologies are: V-shaped, U-shaped, W-shaped, and L-shaped recessions.

V-shaped: a V-shaped recession is marked by a sharp but brief period of economic downturn with a clearly defined trough, followed by a strong recovery. V-shapes are the normal shape for recession because recessions and their recoveries have a tendency to trace out a V shape.

U-shaped: the U-shaped recession is longer than the V-shaped recession, and is less clearly defined. In this case, the GDP may shrink for several quarters after which a slow return to the normal growth trend is observed. In the words of Simon Johnson, former Chief Economist for the International Monetary Fund, a U-shaped recession is like a bathtub: "You go in. You stay in. The sides are slippery. You know, maybe there's some bumpy stuff in the bottom, but you don't come out of the bathtub for a long time.

W-shaped: In a W-shaped recession, (also known as a double-dip recession), the economy experiences a doubled case of recession within a relatively short interval. In this case, the economy falls into recession, struggles and recovers within a short period and gains some of growth, then falls back into recession before finally recovering. This gives a "down up down up" pattern resembling the letter W.

L- Shaped: The L-shaped recession or depression usually portrays a depressed economy in a severe state of recession which does not return to trend line growth for many years, if ever. The steep drop is followed by a flat line makes the shape of an L. This is the most severe of

the different shapes of recession. Alternative term for long periods of underperformance is depression.

2.3 Types of Recession based on magnitude

Based on magnitude, Ranchin (2009) identified the following four categories of recession:

Minor Recession: This is the first class of recession and is usually the mildest. Recessions of this nature usually lasts for at most three quarters and the mean quarterly GDP decline is up to about 1.5%. The economy recovers swiftly from this kind of recession. Macroeconomic indicators return to their pre-recession levels within one or two years.

Major Recession: This is the second class of recession in which major economic events take place on a global scale. The events last between 2 to 4 quarters with mean quarterly GDP growth rates decline between 1% and 3%. When this kind of recessions happen, governments and central banks are drafted to fight its economic consequences through increased investment and export supports, coupled with a decreased government spending on social services.

Severe Recession: The third class of recession, severe recession, constitutes a large-scale economic downturn which has not been seen in many decades. Its severity is expressed in its duration and magnitude of GDP decline. Severe recessions are typically known to last between 1-2 years with a mean quarterly GDP growth rates decline from 3% to 5%. This type of recession is associated with a drastic fall in living standards of majority of the population (Rachlin, 2009).

Ultra Recession: This is recession that lasts for several years with a GDP growth rates decline which may be as high as between 20-25 % annually. During this kind of recession, the GDP falls by 30 % or more when put side by side with the pre-recession GDP levels. Furthermore, recovery from this type of recession may last a decade or longer. Examples of this type of recession are the Great Depression, about 6 years in Russia during 1990s and about 9 years in Ukraine during 1990s.

However, this classification of recession has unraveled the best sociological understanding about recession and its durability. Based on the shapes of recession, V shape falls on the same line with minor recession which is based on magnitude; U shape recession and Major recession fall on the same line and Nigeria experience of recession has gone far than these two aforementioned recessions. It seems Nigeria recession falls on the L shape of recession and Ultra magnitude of recession because Nigeria has been declared to be in recession since the end of 2015 to this moment (2018). This means Nigeria recession has reached highest duration of recession. Our major area of concentration as far as this study is concerned is not really the type of recession, although it has given a clear empirical understanding of recession but this study is geared towards examining the possible sociological effects of economic recession on the business people who represent grassroot people in the society.

2.4 Effects of Economic Recession

When an economy slides into recession, certain unfavorable consequences become manifests which affect all aspects of national life. This is further worsened when a nation is not able to work out necessary modalities for its exit. In addition, if local production of consumer goods fails to meet up with demands of consumers, the recession bites harder. In

this sense, some of the effects have not been friendly to public and private sectors, organizations and traders who are the grassroot of the society. These effects are identified as follows:

Income and Businesses: the commencement of recession in an economy is mostly accompanied by a fall in the income of the people. As a result, their purchasing power is affected and this affects their demand for goods and services. In response to this, firms are forced to cut down production and manpower in order to avoid huge losses. Thus, unemployment prevails due to massive layoffs; there would be sharp decline in production and purchase of new equipment. Several other aspects of the economy such as research and development would be affected. In some cases, business activities fall and eventually fold up (World Economic Outlook, 2009; International Monetary Fund, 2009). However, in term of income especially in Nigeria, recession is marked by poor money circulation resulting in low earnings by households. Consequently, their eco-social well-being is negatively affected leading low income earners to scout for alternative sources of income to support their families (Noko, 2016). Afe & John (2017) maintained that one major impact of economic recession on Nigerian economy is withdrawal of commercial banks and businesses from investing in the Nigeria stock market and other promising business ventures.

Currency Devaluation: Another negative effect of economic recession is drop in currency value and eventual drop in purchasing ability of the people. Although, devaluation is sometimes resorted to in order to encourage local production, it sometimes occur naturally as a result of imbalance between import and export ratio of a country. Thus, currency devaluation usually serves to boost the aggregate demand of goods and services through local productions for export.

Financial Market: One of the major components of any modern economy is financial market; this is because economic crises are always financial oriented. As such, one of the key areas usually affected by economic recession is the financial market. With financial and economic crises, there has been withdrawal of capital from the financial market, apart from withdrawal of capital, would be investors would be reluctant to invest as a result of weakness in the economy. Furthermore, incidence of recession often lead to many stock holders be struggling to sell their shares as a result of losing confidence in the financial market or as a result of trying to cope with recession experience.

Unemployment and Poverty: One of the active and actual consequences of economic recession is high rate of unemployment. Even before the advent of economic recession, Nigeria is besieged with hydra headed problem of unemployment but the rate and effects increased drastically with the advent of recession. This is because thousands of graduates who are churned out from tertiary institutions yearly hardly find any job placement in addition to the already existing jobless ones seeking employment. The statistics by the Federal Ministry of Labour and Productivity shows that at least 41% of Nigerian graduates are without employment after the mandatory National Youth Service Corps (NYSC). Similarly, the National Bureau of Statistics puts it that over 50% of youths in Nigeria are jobless (NBS, 2016); while the World Bank puts the figure at 56%. This fact is alarming given the country's estimated population of about 167 million and 60 million are without gainful employment. Closely related to the problem of unemployment is the problem of

poverty. Indeed poverty is in high rate in Nigeria. Chioma (2016) opines that the fusion of poverty with high level of economic and social aspirations set the track for kick off of criminal activities particularly in areas of official corruption, ritual killings, robbery and dealing in illegal goods and services.

Poor market flow and decreasing purchasing ability: The consequences of recession touch on both formal and informal sectors of the economy. Informal market institutions and small-scale traders are responsible for feeding Nigerian millions of households in the country, but recently the issue of economic recession has led to lack of savings and capital and this makes it difficult for women and men in the informal sector to expand their businesses and undertake more productive activities. Consequently, the productive bases of women who are predominant in the informal sector and their contributions have reduced due to inaccessibility to credit as a result of recession and this has really affected their market operations (Ademu, 2016).

Basic necessities: During recession of an economy, hardship is known to take over every aspect of people's livelihood. Most families feel the bite of the unfavorable economic climate which hits poorer families more severely. Some Nigerian residents in the South-East zone of the country have said that the current economic recession has impacted negatively on their general well-being. In a random survey by the News Agency of Nigeria (NAN), the respondents said it was now difficult to enjoy three square meals a day. According to them, every aspect of their lives was affected, especially meeting their children's requirements at school (News Agency of Nigeria, [NAN] 2016). Recession can also be disastrous as it affects source of income, ability to meet basic daily needs, family frictions. For instance, some families had already cancelled holidays abroad, sold houses and changed children's schools to public schools as a way to cope with recession. Recession draws thick line between needs and wants and priorities accordingly (Ademu, 2016).

3. Methodology

The specific methodology steps followed in the study are discussed further.

3.1 Research Design

The research design for this study is the survey method. Survey was adopted as the research design as a result of the fact that the research variables and study respondents are social in nature.

3.2 Study Population

This research work was carried out among business people in Molete Market in Ibadan. 1500 business men and women that traded in the market constituted the population for the study. The projective population of active market men and women that occupied the market was given to the researchers by Chief Mrs Olowoake Ajagbe the market head (iyaloja) of Molete Market.

3.3 Sample Size and Sampling Techniques

Based on the given population of the study, 10% of the entire study population (150) respondents were chosen as the study sample for the quantitative instrument while 10% of 150 (15) respondents were chosen for interview. The study adopted both cluster and simple random sampling techniques to select sample for quantitative data while purposive sampling

was utilized to select respondents for the interview sessions. *Research Instrument*: both quantitative and qualitative research design techniques were used in eliciting information from the respondents, thus questionnaire and interview were used for data collection. The questionnaire contained relevant sections in accordance with the study objectives while the interview guide contained qualitative questions regarding the active variables of the study.

3.4 Independent and Dependent Variables

The independent variable in this study is economic recession while the dependent variables are market flow, purchasing ability, business continuity and affordability of basic necessities of life.

3.5 Methods of data analysis

Data analysis was done in this study in accordance with the objectives of the study and the nature of data collected for analysis. To this extent, quantitative data were analysed using both descriptive and inferential statistical tools. Thus, frequency count and percentage were used to achieve objectives of the study that are descriptive in nature. Furthermore, regression was utilized as the inferential statistical tool to achieve the main objective of the study. The qualitative data were analysed using verbatim quotations of the interview responses. SPSS 21.0 was adopted as the statistical tool to run the quantitative data collected for the study.

4. Data presentation and analysis

This sub-section is used to present and analyse the primary data collected for the study. The data were presented and analysed in line with the dependent and independent variables of the study. Data presented in Table 4.1 was derived from section B of the questionnaire that deals with issues regarding economic recession experience of the respondents, while the data presented in Table 4.2 dwelled on the analysis of measurable variables on the effects of economic recession on business operations of traders in Molete Market, Ibadan.

Table 4.1: Respondents' conception regarding current economic recession

Items	Frequency	Percentage
1	<i>Severity of the Economic Recession</i>	
	More Severe	47 31.3%
	Much Severe	73 48.7%
	Most Severe	30 20.0%
	Total	150 100.0
2	<i>Effect of recession</i>	
	High	139 92.7%
	Low	6 4.0%
	Indifferent	5 3.3%
	Total	150 100.0
3	<i>Year</i>	
	Last Year	55 36.7%
	This Year	57 38.0%
	Indifferent	38 25.3%
	Total	150 100.0

Source: Researcher's fieldwork, 2018

Item 1 on Table 4.1 depicted that of 150 respondents, 47 (31.3%) responded that the current economic recession was more severe, 73 (48.7%) of them responded that current state of economic recession was much severe, while 30 (20%) of the respondents responded that the current economic recession was most severe. By implication, all the respondents had felt the severity of the economic recession in one way or the other. This position is verified by interview response of one of the traders who responded that:

“The economic recession really affected me, I still come around to my place of market everyday it has gotten to a stage that I won’t be able to open my shop , I still sell anytime I come around but not the way I used to (sic) A 39 year old female Fruits’ seller at Molete Market”

Item 2 on the Table shows that 139 (92.7%) responded that, the current economic recession highly affected their business operation, 6 (4%) of the respondents responded that the current economic recession did not really affect their businesses while just 5 (3.3%) of them were indifferent about their decision. This is supportive to the observations made in the first item on Table 4.1, the distribution of the responses connotes that incidence of economic recession has affected business of the traders at Molete market, Ibadan. This result can be verified by responses of some of the traders interviewed:

The economic recession has struck my business, before the economic recession it was trailer that comes around to deliver my goods but now it is a pick up vehicle that comes around to deliver my goods. A 44 years old yam seller at Molete Market

Another interviewee responded thus:

Before now, I normally buy in ‘apo’ (sack) but now; it is four quarter of the sack I buy because one thing about fruits is that, it can easily get rotened. A 39 years old Fruits seller at Molete Market

On the comparative description of recession experiences over the years, item 3 on the table revealed that 55 (36.7%) of the respondents said that, the previous year economic recession was more severe as compared to current year, 57 (38%) responded that this year economic recession is more severe, while 38 (25.3%) of the responded were indifferent about their view on which year economic recession was more severe.

Item one Table 4.2 depicted that 143 (95.3%) out of the sampled traders at Molete market responded that the recession had negative effect on their market flow, 3 (2%) of them disagreed that the recession had no effect on their market flow, 4 (2.7%) of them were inconclusive. With this report, it can be said that the economic recession had negative effect on the level of their daily sales.

Table 4.2: Measurable variable on the Effects of Economic Recession on business

Items	Frequency	Percentage
1		
Market flow		
Yes	143	95.3%
No	3	2.0%
Indifferent	4	2.7%
Total	150	100.0

Items	Frequency	Percentage
2	<i>Business continuity</i>	
	Yes	148
	No	1
	Indifferent	1
	Total	150
3	<i>Basic need</i>	
	Yes	147
	No	2
	Indifferent	1
	Total	150

Source: Researchers' fieldwork, 2018

To substantiate the negative effects of recession on market flow (daily sales) of the sampled business men and women in the market, responses of some interviewed respondents were quoted below:

This recession affect my sales, the money I normally used to buy carton of fish, I use the double of this money now to get the half of carton which in turn affects the sales A business woman (fish seller) in Molete Market.

To further measure the effects of economic recession on business operations of traders, item 2 of Table 2 shows that, 148 (98.7%) respondents held the view that incidence of economic recession has negative effect on business continuity, only just 1 (0.7%) held an opposite view and same number had an indifferent view on the question relating to business continuity. This revealed that majority of the traders' business continuity were severely affected by the current economic recession. This was further buttressed by the comments of traders, one of which was quoted below:

This recession affects the continuity of my business because before the recession comes around to stay, I do go to market everyday to buy palm oil in kegs but now hardly go to market every three to four days because even a gallon of keg now takes two days before I sell it out and this makes me not to be really motivated to come around to shop or even send my children to hawk, A 42-year-old business woman (palm oil seller) in Molete Market, Ibadan

Item 3 on Table 4.2 also revealed that 147 (98%) respondents maintained that the economic recession has effect on their ability to secure basic needs, 2 (1.3%) of the respondents held dissimilar view while just 1 (0.7%) were inconclusive. This implied that majority of the respondents reported that the current economic recession really affected their ability to secure their basic needs. The interview responses buttressed this further:

This recession has affected the provision for the family in general especially in terms of what to eat but I pray it does not take our lives away. A 39-years old trader (fruits' seller) in Molete Market, Ibadan

What could be inferred from the responses analyzed in Table 4.2 is that economic recession has serious consequences on business operations and general livelihood of the sampled

traders in Molete market. However, to ascertain the observations made from the descriptive analysis of the responses, effort was further made to subject the research assumption to further testing. This was achieved through testing the hypotheses that were raised for the study.

4.1 Testing of Hypotheses

In testing the hypotheses for this study, from each hypothesis an independent variable was tested against one dependent variable, thus, simple linear regression analysis was used and the major focus was to ascertain the effect of the independent variables on the dependent variable. Thus, in general form, the hypotheses tested in this research work include the following:

H0₁: Economic recession has no significant effects on market flow or sales of traders in molete market, Ibadan.

H0₂: Economic recession has no significant effects on basic necessities of traders in molete market, Ibadan.

H0₃: Economic recession has no significant effect on business continuity of traders in molete market, Ibadan.

Hypothesis one: Economic recession has no significant effects on market flow (daily sales) of traders in Molete market, Ibadan

In this section, the hypothesis tested would consider one independent variable and one dependent variable. The independent variable to be considered in this respect is *Traders' conception about current economic recession* and the dependent variable is *market flow or sales of traders*. Table 4.3 presents the statistical result of the hypotheses tested.

Table 4.3: Summary of Simple Regression Analysis Test of current economic recession on the effects on market flow (daily sales) of traders

Variables	Co-efficient	Standard Error	t-statistics	P-value
Constant	1.017	0.081	12.495	0.000
Market Flow	- 0.030	0.040	3.206	0.460

R Square: 0.401 No. of Observation: 150
Adjusted R Square: 0.003 R: 0.061 F-statistics: 5.493

Source: Authors Computation

4.2 Interpretation and findings

Judging from the table 3, it is revealed that the current economic recession (independent), have a negative relationship with market flow or sales of traders (dependent). In other words, market flow or sales of traders is negative influenced by the current economic recession. By implication, the result shows that current economic recession had effect on market flow of traders but the effect was negative, this means that the higher the rate of economic recession, the lower the market flow or sales of traders. This is reflected in the co-efficient of the regression results. Figure 1.017 represents the intercept which implies that whether there is economic recession or not, there will be an existence of 1.017 market flow or sales of traders in the study setting. Exclusively, current economic recession (-0.030), represents the magnitude of its relation with market flow or sales of traders. Also, from the

results of this regression analysis, it is revealed that the computed standard errors of the regression model (0.081) for intercept, while B(0.040), is for the slope. From the standard errors, it is obvious that B (0.040) which is for the economic recession is greater than half of its numerical value of the parameter estimate.

Thus, the standard error of the current economic recession as an independent variable shows there is a positive relationship between it and market flow or sales of traders (dependent variable). In other words, the null hypothesis should be rejected because the test is statistically significant. The empirical value of t-test for the intercept is (12.495), while the slope is 3.206 with its theoretical value at 0.05 level of significance as 1.480. Since the empirical value of the current economic recession B(3.206) is greater than the critical value (1.960), therefore, we therefore reject the null hypothesis and accept the alternative hypothesis, thus we should conclude that current economic recession have a significant effects on the market flow or sales of traders. For R-square figure (0.401) shows that about 40 percent of the total variation of the dependent variable is explained by the independent variables (current economic recession). Above all, the computed empirical value of F-test is 5.493 while its theoretical value at 0.05 level of significant is 3.90. Since the computed empirical value is greater than its theoretical value. It is concluded that the F-test is statistically significant. Therefore, the whole regression is statistically significant.

This finding was verified by the interview response as presented below:

Ah! In fact, this recession of a thing really affects us more than ever. I am a yam seller, a yam seller of a very large scale. Prior to this recession period, we use to load in yam in trucks, but now due to the hike in prices of everything, such as the cost from the farmers, the transport fees etc. we now load in yam in small basket sizes. By this, really affects our sales and returns. A 44-year-old market trader (woman) at Molete market, Ibadan

This respondent complained a lot about how the current economic recession and its attendance effects really affected their market flows and in turns their returns.

From this comment, one can deduce that indeed, there is significant relationship between the current economic recession and market flow or sales of traders in Molete market, Ibadan. The current economic recession really affected the costs at market. This comment can be supported by the position of Anikwe (2016), who maintained that the prices of commodities had changed so rapidly that it was difficult to replenish market, She further maintained that by the time one returned to the market to buy new stock, the price would have gone higher than the money one had. This always results to deficit and market would always be affected.

Hypothesis two: Economic recession has no significant effect on business continuity of traders in Molete market, Ibadan.

In this section, the hypothesis tested considered one independent variable and one dependent variable. The independent variable considered in this respect was *current economic recession* and the dependent variable was *business continuity of traders*. Table 4 presents the statistical result of the hypotheses tested.

Table 4.4: Summary of Simple Regression Analysis Test of Significance effect of current economic recession on the business continuity of traders

Variables	Co-efficient	Standard Error	t-statistics	P-value
Constant	0.986	0.042	23.271	0.000
Business continuity of the traders	-0.018	0.021	8.490	0.397

-R Square: 0.502 No. of Observation: 150
Adjusted R Square: -0.002 R: 0.070
F-statistics: 7.201

Source: Authors Computation

4.3 Interpretation and findings

Judging from the results in Table 4.4, it is revealed that the current economic recession (independent) has a negative relationship with business continuity of traders (dependent). In other words, business continuity of traders is negative influenced by the current economic recession. By, implication, the result shows that current economic recession has effect on business continuity of traders but the effect was inverse. This means that the higher the rate of economic recession, the higher the business continuity of traders is being shortened. This could further be seen in the co-efficient of the regression results. Figure 0.986 represents the intercept which implies that whether there is economic recession or not, there will be an existence of 0.986 business continuity of traders in the study setting. Exclusively, current economic recession (-0.018) represents the magnitude of its relation with business continuity of traders. Also, from the results of this regression analysis, it is revealed that the computed standard errors of the regression model (0.042) for intercept, while B (0.021) is for the slope.

Thus, the standard error of the current economic recession as an independent variable shows there is a positive relationship between it and business continuity of traders (dependent variable). In other words, the null hypothesis should be rejected because the test is statistically significant. The empirical value of t-test for the intercept is (23.271), while the slope is 8.490 with its theoretical value at 0.05 level of significance as 1.480. Since the empirical value of the Current Economic Recession B (8.490) is greater than the critical value (1.960), therefore, we therefore reject the null hypothesis and accept the alternative hypothesis, thus we should conclude that current economic recession has a significant relationship with business continuity of traders. For R-square figure (0.502) shows that about 50 percent of the total variation of the dependent variable is explained by the independent variables (current economic recession). Hence it shows the moderately fit of the regression model. Above all, the computed empirical value of F-test is 7.201 while its theoretical value at 0.05 level of significant is 3.90. Since the computed empirical value is greater than its theoretical value. It is concluded that the F-test is statistically significant. Therefore, the whole regression is statistically significant

This finding can be verified in the words of a trader:

My products for instance are perishable, due to this recession now we buy them in small quantity so as to avoid the lots of them being destroyed since market flow is now really low.

Yet this does not help sometimes so that I have to halt this business for other business till things get better. A 42-year-old market trader at Molete market, Ibadan

Another interviewee identified also spoke a on the continuity of their market as being affected by the current economic recession.

This economic recession has really given us recess. Very fewer customers we get. Now, usually we come to market almost 4 days in a week. So, the continuity of this business has really been shortened by this current recession. A40-year-old trader at Molete market, Ibadan

Both respondents emphasized that as a result of the economic recession then has shortened their business continuity. They pointed out that most of the days of the week they went off because the business flow was really in downturn those days of economic recession.

Hypothesis three: Economic recession has no significant effects on ability to secure basic need

The independent variable to be considered to test this hypothesis is *current economic recession* and the dependent variable is ability of traders to secure basic necessities. Table 5 presents the statistical result of the hypotheses tested.

Table 4.5: Summary of Simple Regression Analysis Test of Significance Effect of Current Economic Recession on Ability of Traders to Secure Basic Necessities

Variables	Co-efficient	Standard Error	t-statistics	P-value
Constant	1.023	0.066	15.608	0.000
Affordability of basic necessities	- 0.090	0.033	2.780	0.781

R Square: 0.101 No. of Observation: 150
Adjusted R Square: -0.006 R: 0.023 F-statistics: 7.820

Source: Authors Computation

4.4 Interpretation and findings

Judging from the table 5, it is revealed that the current economic recession (independent) has a negative relationship with basic necessities of the traders (dependent). In other words, basic necessities of the traders were negatively influenced by the current economic recession. By implication, the result shows that current economic recession has effect on business continuity of traders but the effect is negative (inverse), this implies that the higher the rate of economic recession, the lower the lower the rate at which the basic necessities of traders is achieved. This could further be seen in the co-efficient of the regression results. Figure 1.023 represents the intercept which implies that whether there is economic recession or not, there will be an existence of 1.023 market flow or sales of traders in the study setting.

Exclusively, current economic recession (- 0.090), represents the magnitude of its relation basic necessities of traders. Also, from the results of this regression analysis, it is revealed that the computed standard errors of the regression model (0.066) for intercept, while B(0.033), is for the slope. Thus, the standard error of the current economic recession as an independent variable shows there is a positive relationship between it and basic necessities

of traders (dependent variable). In other words, the null hypothesis should be rejected because the test is statistically significant. The empirical value of t-test for the intercept is (15.608), while the slope is 2.780 with its theoretical value at 0.05 level of significance as 1.480. Since the empirical value of the Current Economic Recession B (2.780) is greater than the critical value (1.960), therefore, we therefore reject the null hypothesis and accept the alternative hypothesis, thus we should conclude that current economic recession has a significant relationship with basic necessities of traders.

For R-square figure (0.101) shows that about 10 percent of the total variation of the dependent variable is explained by the independent variables (current economic recession). Hence it shows the weakly fit of the regression model. Above all, the computed empirical value of F-test is 7.820 while its theoretical value at 0.05 level of significant is 3.90. Since the computed empirical value is greater than its theoretical value. It is concluded that the F-test is statistically significant. Therefore, the whole regression is statistically significant. Comments retrieved from the interview session corroborated this further:

Though this business is good, it is daily business, the income is daily but these days of economic recession has really affect what I have to buy, to consume, to eat and for my family. Maybe it is because of the workers' salary is no more regular or is because of this election but what I know for sure is that this recession has hands in it. I have to measure carefully now what I have to buy now. My children on a normal day would have eaten a normal food now, but as you too can see since morning, they have just eaten eat garri. A 39-year-old business woman (fruit seller) in Molete Market, Ibadan

This respondent highlighted that the effects of the recession on the market flow and sales daily has also greatly affect the way she lavishes money on what she has to buy every day for her basic needs before, but now, she has to be very careful. Another interviewee identified also spoke a lot on the effect of the recession on their basic needs.

Yes, the recession has indeed reset especially our daily menu, now we have to measure what we buy, in fact when my children ask for any school fee money, I used to tell them that if the school will not allow them to stay, they should come to my shop so that we can more money together so as to help our needs to be met. A 42-year-old business woman (vegetable seller) in Molete Market, Ibadan.

This statements from the interviewees simply affirmed that the current economic recession has a significant relationship on basic necessities of traders, however an inverse relationship between the two variables which implies that the current economic recession is at rise and as such daily basic necessity of the has been difficult to achieve. Taiwo (2016) advocated that recession draws thick line between needs and wants and priorities accordingly because recession period as income had shrunk, the needs like shelter, health care, feeding clothing and schooling will be treated as priority over any other wants.

5. Conclusion and Recommendations

This study was conducted to empirically examine the dimensions of effects of economic recession on business operations of traders in Molete market, Ibadan-Nigeria. The findings emanating from the study indicated that economic recession has negative implications on the market flow (daily sales output), business continuity and purchasing ability of the

respondents. Based on these findings, the study concluded that economic recession has devastating effect on business operations of traders and by extension their general livelihood and wellbeing. Thus, explanations on the current business operational status and general wellbeing of the people could be traced to the incidence of economic recession. Based on the above, the following recommendations are offered for relevant stakeholders.

From earlier observations and also from the empirical findings of this study, it could be established that recession is real and consequential. Thus, the study recommends that the ministry of Finance at states and federal level in the country should add more to their effort of controlling and taking the country out of recession. This could be achieved by the affected ministries floating appropriate economic policies that will mitigate the effects of recession on the people, take the economy out of recession and prevent further occurrence of economic recession in our society. This feat could be specifically achieved by ministries such as Federal Ministry of Finance; Federal Ministry of Budget and National Planning; and Federal Ministry of Commerce that are governmental bodies in charge of formulation and execution of strategic development plans, guidelines and policies which shape the nature of domestic and foreign trade, investments and international economic cooperation. In addition, these governmental bodies are required by law to formulate policies on taxation, tariffs, fiscal management and preparation and management of annual budget. Other duties such as preparation of annual accounts for ministries, departments and agencies, managing federal debt and regulating the market flow should all be given proper attention needed to achieve efficiency in such areas. Policy proposals on domestic trade should be worked out in order to overhaul the entire economy. This would foster profitable partnerships and develop local markets, promote restructuring of the commercial distribution sectors and improvement of modern distribution modalities. More so, policies should be reviewed timely and new ones hatched for assisting the market flow to retain its balance should there be any case of imbalance such as the economic recession.

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Crude Oil Price Fluctuations and Nigerian Balance of Payments 1987-2017

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Abstract

Until we realized that oil is a blessing to a nation in disguise and put our heads in the same basket to move this country to the promised land when the proceed from oil will no longer be shared among capitalists but used for development of other sectors to boost export and strengthen balance of payments. Crude oil prices and balance of payment are two key elements of the Nigerian economy because of the over-dependence on the oil sector. Obviously, our economy depends on the oil sector and neglects other sectors of the economy (agricultural, manufacturing, and service) which makes the economy volatile to shock in oil price fluctuations. This leads to the syndrome of Dutch disease because oil revenues are perceived as the only hope for prospering our economic growth and development. This study investigates oil price fluctuations and Nigerian Balance of Payments using time series data spanning from 1987 to 2017 and employed Auto-regressive Distributive Lag (ARDL) model. It was discovered in the study that there exists a long run relationship between the balance of payments and the crude oil prices in Nigeria within the study period. Furthermore, the study revealed that in the long run, crude oil prices and exchange rate are the determinants of the balance of payments while the short run dynamics pointed out that the past value of inflation rate and crude oil prices are what determine the balance of payment direction in the short run. The study, therefore, recommends that the appropriate authorities should consider diversification of the economy export base from oil, exchange rates review, inflation control measures as well as interest rate monitoring so as to get the best balance of payments position.

Keywords: ARDL, Balance of Payments, Crude oil price, Nigerian economy.

JEL Classification: E32, E42,

1. Introduction

The Nigerian economy over the time is basically a mono economy that solely relies on single exports of crude oil products (Odularu, 2008) and has no actual effect on the world oil prices, meanwhile it is greatly vulnerable to global oil price uncertainty as an importer of refined petroleum products and heavy dependence on crude oil revenue (Sanya, 2015).

Since the oil boom era till date, there has been negligence to the robust agrarian resources and light manufacturing bases in support of morbid reliance on petroleum resources (Busayo, 2013). According to Broni-Bediako, Onyije, and Unwene, (2018), revenue from petroleum due to increasing prices of crude oil led to a recurrent decline of other sectors. Performances in the economy have led to a defect which is known as the “Dutch Disease Syndrome” which has been identified as-the structural economic imbalances arising from bungling of oil income that brings about adverse influence on the economy, thereby leaving the nation’s non-oil outputs to gain lower prices in the highly competitive global market.

After the oil boom era, when the Nigerian economy benefited from a steady (BOP) surplus, her balance of payments has been fluctuating between positions of surplus and deficit. Nigeria has recorded well over fifteen deficits in her balance of payments account CBN (2010; 2011). So many reasons have been suggested for the factors causing balance of payments disequilibrium in the economy. According to Gbosi (2002), these reasons are due to fluctuations in the prices of crude oil, low improvement in non-oil export, high rate of imported goods and services, persistent decline in the country’s foreign exchange and ineffectual industrial sector.

The recurrent importance of the creation of substitutes to fossil-fuel energy such as shale gas, solar, bio-energy and wind in the developed nations (such as the US) has reduced the demand for crude oil. Crude oil prices climaxed at \$114.21 per barrel in 2012, this was followed by a descending trend that pushed the price to fall drastically to less than \$54.41 per barrel from \$114.21 per barrel between the periods of mid-2014 and early 2015 and currently at \$33.62 p/bbl in the earliest parts of 2016 (BP Statistical Review of World Energy, 2015).

The topical nose-diving in crude oil prices indisputably charged the biggest economy on the African continent into an economic quicksand with devastating consequences on some of its main macroeconomic indicators. General price levels started to rise steadily while the currency exchange rates kept depreciating, bringing about enormous economic snags among the populace which in due course resulted in fiscal and economic disequilibrium. Interestingly, as crude oil prices kept dropping at the global market, the domestic pump price of petroleum products in Nigeria suffered distortions and upward review (Busayo, 2013; Ishmael, Mathew & Park, 2017). The problem is made complicated by years of corruption in the Nigerian oil sector, thereby worsening certain situations in the country which include poverty, unemployment, processing and distribution costs, social conflicts in oil-producing areas leading to pipeline vandalism, oil theft, kidnapping of expatriate oil workers, interference in the demand and supply of petroleum products (Eneji, Mai-Lafia, & Nnadi 2016).

This study will respond to two research questions: Do crude oil price fluctuations influence Nigeria balance of payments and what are the responsible factors for the dynamics of these fluctuations?

Nigerian balance of payments is vulnerable to crude oil price. Statistics show that from the period 1970 to 2014, Nigeria has witnessed thirty-one years of BOP disequilibrium (CBN, 2017). The first half of 1970’s marking the era of oil innovation and exploration, the

economy enjoyed BOP surplus as the balance of payments rose from N46.6m in 1970 to N3, 102.20million in 1974 nevertheless in 1975 it decreased to N157.5million. But 1976 to 1978 were marked by BOP deficit (Olisah, 2018).

This era of 1970's was governed by military regime and the balance of payments was in surplus. There was also institutional quality proxied by contract intensive within this period which money was on the increase in interest rate liberalization policy of the Structural Adjustment Programme (SAP) of 1986. One would have expected improvement in the ordinance to the anticipation of the theory. With the BOP, but that was not the outcome as BOP's trend continued to be deficit. Since 2005, Nigeria's balance of payments has been recording deficit; this may be partly due to high levels of interest and inflation rates experienced in the economy (Olisah, 2018).

The current account balance grew with an increase in oil revenue trends reflecting a rise in importation rate as oil proceeds grew. Current account balances dropped by 22.7% in 1982 and further by 14-6% in 1983 arising from a decline in oil earnings and restrictions in global trade through the stabilization act implementation, current account balances dropped by. (CBN, 2001).

According to CBN Annual Report (2011), there was an enhancement in the Foreign Sector in 2011 with a projected inclusive BOP surplus of N47.1 billion in deviance to an initial deficit of N1, 491.5 billion in 2010. The Current Account Surplus dropped to N1, 336.8 billion, which was lesser than the N1, 993.0 billion documented in 2010. This expansion was accounted for by the expanded deficits of 20.0 and 18.8 per cent in income accounts as well as services.

Balance of payments (BOP) position as at first quarter of 2018 endorsed that the country's external position remained strong but susceptible to crude oil and gas market. The temporary BOP figures for first part of 2018 published by the CBN showed that the overall BOP for Nigeria showed a surplus of US\$ 7.32 billion in first quarter 2018. A viable BOP helps to sustain stability in the forex market and lessen exchange rate risk. Nigeria's influxes into the current account were dominated by crude oil and gas exports, accounting for 93.28 % of all exports and 64.46 % of all inflows (Sunday, 2018).

It is imperative when you discuss crude oil price fluctuations and BOP, the twin moves proportionately because during oil boom, BOP used to be favorable for developed countries that make good use of the proceeds from sells of crude revenue but in developing countries like Nigeria the reverse is the case. The huge revenues are spent on imported luxury goods instead of manufacturing goods thereby creating an unfavorable balance of payments. This is one of the reasons why crude oil is seen as a Dutch disease because most of the oil nations today suffer from extreme poverty, high unemployment, corruption, high crime rate, crises, terrorist, low growth rate, unfavorable BOP, etc. with decaying and backward economy. These occur because of primitive accumulation of oil revenue by the capitalist, who prefers the country should be under their nose. Oil was supposed to serve as a vehicle for development but it was sabotaged from the beginning (Otaha, 2012; Eneji et al 2016).

Crude oil is an exhaustible asset which makes it unreliable for sustainable development of the Nigerian economy. Therefore, reliance of the Nigerian economy on crude petroleum

earnings as the main basis of income is able to raise doubt about the elasticity of the impact of crude oil price fluctuations on macroeconomic unpredictability (such as interest rates, inflation rates, BOP, as well as exchange rate, among others) in the country. The Nigerian oil sector is a key sector because oil has been the life wire of all economic activities in Nigeria, and as such the need arises for the formulation of a suitable and needed exploration as well as marketing policies for the sector. Thus, the importance of assessing the comparative effects of oil prices on the country's BOP (Babatunde and Adekunle 2017).

There are studies relating to oil prices and balance of payments such as, Udede (2015), Alhassan and Kilishi (2016), Eme (2016) and Eneji, Mai-Lafia and Nnadi (2016) but their study coverage is limited and the method of analysis used did not capture the short and long run dynamics which seem to have created a gap. This study will examine the crude oil price fluctuations on Nigeria's BOP through an extended span of time using the Auto-Regressive Distributive Lag (ARDL) model to explore the dynamics of crude oil price fluctuations on BOP in Nigeria and determinants of the BOP. This study also endeavors to close some of the prevailing openings in the existing research on Nigerian economy.

Therefore, the study is structured into five sections. After the introductory section which acts as the precursor of this study, four other sections follow viz; literature review, methodology, discussion of results, and conclusion and policy implications.

2. Literature review

Ishmael et al (2017) define crude oil prices as the measurement of the spot value of several barrels of oil quoted in the global oil market. These barrels of crude oil comprise Brent Blend, New York Mercantile Exchange (NYMEX), West Texas Intermediate (WTI), OPEC basket price and futures price, among others. The Nigerian crude oil belongs to the OPEC Basket Price group which is the average price obtained from Nigeria which comprises other economies such as Mexico, Saudi Arabia, , Indonesia, Venezuela, Dubai, and Algeria. OPEC Basket price is lower in price compared to Brent Blend and WTI due to lower quality of oil.

Busayo (2013) conceptualizes crude oil price to be the value in dollars of a barrel of crude oil in the global market. Oil price fluctuation refers to the swings of instabilities in oil price over a duration or deviance from a benchmark. Therefore, crude oil price fluctuation is an extent of the fluctuations (i.e. incline and decline) of the worth of oil across a duration. Numerous factors have been identified as causes of oil price fluctuation. These factors include demand and supply of crude oil, OPEC decisions, and civil unrest. It is due to these fluctuations in the value of crude oil as well as Nigeria over-reliance on petroleum revenue that many economists raise concern about the future of the economy (Mgbame, Donwa & Onyeokweni 2015).

According to Jhingan (2010) "the BOP is a technique of itemizing payments and receipts in a country's transaction with other countries". Cohen sees the balance of payments as an instrument which shows a county's trading positions, variations in its net position as a foreign borrower or lender as well as changes in its official reserve holdings with other countries of the world.

The balance of payments can be defined as a methodical record of fiscal and financial relations for duration of time-say a year-between a country and other nations. These transactions involve provision of receipts and payments to the rest of the world (Imoisi, 2012).

Generally, transactions are classified into credit and debit entries; payments by a non-resident to a country are categorized as credit items while expenses by the country to other countries are classified as debit items. Fundamentally, the foreign sector of an economy is separated into capital and current accounts. The capital account comprises of direct investments and portfolio investment, being its short or long term, and capital transfers, whereas the current account includes all entries of current transactions, which are transactions that involve either of import or export of visible as well as invisible products, they also consist of services and merchandise (Imoisi, 2012).

Therefore, a worthwhile BOP position is seen as a current account position that could be an equitable development, debt servicing capability, growth forecasts and also macro-economic variables. To attain external as well as internal stabilities, balance of payments can be funded on a maintainable basis through movement of capital in its net worth on footings that are well-matched with the view that the BOP is associated with other elements in an equilibrium analysis (Imoisi, 2012).

Busayo (2013) investigated the impacts of oil prices, interest rates and external reserves on exchange rate volatility in Nigeria. The study used co-integration tests and VECM over the period 1970-2011 and finding showed that an average variation in crude oil price gave rise to about 2.8% variation in exchange rate instability in Nigeria. It was recommended that the authorities needed to expand from the petroleum sector to other segments of the economy so that the effects of crude oil prices on the economy would be reduced. Udede (2015) analyzed the influence of monetary policy on the Nigerian BOP over the statistical time series data from 1981-2015 using the OLS multivariate regression. BOP was used as the explained variable, while M2, interest rate, exchange rate and GDP as the explanatory variables, the cointegration test showed a sign of significant long run integration among the variables; Such that, M2 and exchange rate had positive coefficients while GDP and interest rates had negative coefficients but not significant in the case of interest rate. Alhassan and Kilishi (2016) evaluated the effects of oil price instability on instability of three key macroeconomic indicators (interest rate, exchange rate and real GDP,) which are highly volatile using the asymmetric and symmetric model. The symmetric model was outperformed by the asymmetric and the price of crude oil was a major cause of macroeconomic instability in Nigeria. They thus concluded that in handling macroeconomic instabilities in Nigeria, more credence should be shown to the asymmetric model. Consequently, necessity arose for the diversification of the bases of Nigerian economy among other sectors like the industrial sector as well as the agricultural sector so as to reduce the over-dependence of the economy on crude oil.

Eme (2016) employed the Vector Auto Regression VAR model in investigating the dynamic association between crude oil price shocks and key macroeconomic indicators in Nigeria from 1970 to 2007. The investigation highlighted the asymmetric impacts of crude oil price shocks; for example negative and positive oil price shocks significantly upturn inflation and

also openly raises real national income via greater export incomes. However, portions of this gain were understood to be offset by losses from lesser demand for exports largely owing to the economic slump underwent by trading associates. The results indicated a robust positive link between positive oil price variations and real state expenditures. Surprisingly, the outcome pinpointed a negligible power of oil price fluxes on growth of industrial output. Additionally, the "Dutch Disease" condition was perceived through significant appreciation of the real effective exchange rate. In conclusion, the study recommended the need for diversification of government revenue from petroleum earnings, decline in monetization of petroleum income (fiscal discipline), increase in the rate of saving of proceeds from crude oil booms in the long run to tackle the issue of fluctuations of oil in the long run. Eneji, Mai-Lafia, and Nnadi (2016) examined the impact of crude oil price instability on macroeconomic indicators and sustainable development in Nigeria from 1990-2015 using the Vector Auto Regression (VAR) Model. The findings of the research showed that unemployment, real GDP, interest rates, balance of payments and exchange rates were substantially affected by the volatility of crude oil prices in Nigeria. Adverse shocks in the global petroleum market significantly influenced price volatilities. Furthermore, there were build-ups of inevitable inflationary pressures and significantly reducing government expenditures as well as revenues all owing to increasing importation. Therefore, diversification and a new source of energy was recommended.

Babatunde and Adekunle (2017) examined the relationship between exchange rate volatility and Nigeria's balance of payment from 1985-2015 using the Johansen co-integration test for long-run relationships, while both ARCH and GARCH were also employed to test volatility of the exchange rates. Findings of the study showed that there was no long-run relationship between BOP position and the exchange rate in the Nigerian economy during the period under review, while the coefficient of the ARCH effect was found to be statistically significant but the GARCH effect was not. The study recommended exchange rate devaluation and should be adopted by monetary authorities so as to boost and attract foreign investors which could bring about advancement in the BOP positions. Ishmael et al (2017) employed the Johansen system co-integration, the Granger Causality Test and VECM systems to examine the influence of variations in petroleum prices on economic progression in Nigeria through 1986 to 2015. The examined time series attributes displayed the presence of co-integration between the variables while the empirical effects pointed that the error correction term was negatively signed and were statistically significant in all the models.

Akatugba (2018) examined the effect of exchange rate volatility on BOP Problem in Nigeria through 1980-2016 employing the Generalized Autoregressive Conditional Heteroscedasticity Model statistical techniques; GARCH (1, 1) using BOP as the explained variable and exchange rate, real gross domestic product; Inflation rate, exchange rate volatility as explanatory variables. The findings asserted that exchange rate maintains a positive association with BOP. Meanwhile real GDP, inflation rate and volatility of exchange rate were inversely related to balance of payments. Therefore government should give more credence to exchange rate volatility in Nigeria. In addition, government should encourage export diversification so that a surplus balance of trade would be maintained which would make Nigeria naira to be strong against other currencies and also avoid further

depreciation of domestic currency in the future. Broni-Bediako, Onyije, and Unwene (2018) employed the Ordinary Least Square (OLS) techniques to examine the economic consequences of crude oil price instability on developing economies, using Nigeria as a case study through the periods of 1990-2015 regressing crude oil price volatilities on key macroeconomic elements. The result of the findings affirmed that changes in oil price (volatility) had effect on macroeconomic variables, although at capricious magnitude. This result showed that crude oil was the key source of foreign exchange income in Nigeria. Following the outcome of the study, it was resolved that volatility of crude oil price has positive relationship with the macroeconomic indicators examined. Also, instability in price determines the rate of interest, BOP, FDI as well as GDP. Diversification of the economic base was suggested as a solution so as to improve export production and improve the economy.

Finally, Olisah (2018) analyzed the impact of institutional quality on BOP position in Nigeria in the period 1970 to 2016 adopting the error correction mechanism. The result displayed a positive link amongst institutional quality proxied by contract intensive money (CIM) and BOP in Nigeria. The coefficient of CIM was significant at five per cent level with the value of 1.25. This implied an improving effect of good institutional quality on Nigeria’s BOP position. The coefficients of exchange rate, price level and interest rate were -0.88, (0.25) and 0.24, respectively. This portended that while exchange rate appreciation and price increase had adverse effect on the BOP, a moderate rise in interest rate would lead to favorable balance of payment position. Government should ensure price stability to encourage demand for the nation’s products. By so doing, investment and production would be enhanced, as well as export which would enhance BOP position.

3. Methodology

The data used for this study were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin (2017), National Bureau of Statistics (2017), and BP Statistical Review of World Energy (2017). The study employed the ARDL method of analysis, in order to obtain both short-run and long-run impact of crude oil price changes and determinants of the balance of payments as used by Imoisi (2012). However, the model was tailored to serve the actual purpose of this study. The model was specified in its functional form as follows;

$$BOP = f(OILP, EXR, INF, INT) \dots\dots\dots 1$$

For the purpose of empirical computation, the model has to be stated in a statistical form which will connote the technique of analysis as thus:

$$BOP = \beta_0 + \beta_1 OILP + \beta_2 EXR + \beta_3 INFR + \beta_4 INTR + \mu \dots\dots\dots 2$$

Where the a priori expectation is as follows,

$$\beta_1, \beta_2, \beta_3, \beta_4 \leq 0 \geq \beta_1, \beta_2, \beta_3, \beta_4$$

Where,

BOP = Balance of Payment (dependent variable)

OILP = Crude Oil Price

EXR = Exchange Rate

INFR = Inflation Rate

INTR = Interest Rate

μ = Error term

In checking for the model fit, the Bounds test was mostly used instead of the traditional F-statistics since the Bounds test has its own F-statistics which is compared to the Pesaran values. A typical ARDL model is presented as

$$Y_t = \beta_0 + \beta_1 y_{t-1} + \dots + \beta_p y_{t-p} + \alpha_0 x_t + \alpha_1 x_{t-1} + \alpha_2 x_{t-2} + \dots + \alpha_q x_{t-q} + \mu_t \dots\dots\dots 3$$

Where Y is the dependent variable and X is the independent variable and μ is the stochastic term. In furtherance of the analysis, the long run relationship was estimated too going by the regular classical linear regression model.

$$Y = \beta_0 + \beta_1 X + \mu. \dots\dots\dots 4$$

In line with the research objective, the variables used in the analytical aspect of this study were time series natured and were of secondary source. Data for each of them was collected from published works.

4. Discussions of Results

Table 4.1: Descriptive Statistics

Variable	Mean	Standard Deviation	Maximum	Minimum	Observations
BOP	-0.03	0.12	0.37	-0.28	31
OILP	44.88	32.81	111.67	12.72	31
EXC	100.27	82.28	305.80	4.02	31
INFR	20.63	18.65	72.84	5.38	31
INTR	0.56	17.98	25.28	-43.57	31

Source: Author's computation using E-views, 2018

The descriptive statistics output in Table 4.1 shows the first parameter (mean) on the first column, the mean value of the dependent variable, BOP is -0.03 with a standard deviation of 0.12 which is a relatively low value. Its maximum value is 0.37 while its minimum value is -0.28. These values are close, thereby showing that there has not been much difference in the balance of payment positions over the years, hence, rates of increase or decrease are minute. The oil price has a mean value of 44.88 which is very large, compared to that of the BOP while its standard deviation is 32.81 which is also a high value, its maximum value is 111.67 while its minimum value is 12.72 which is smaller than the standard deviation and mean value. Furthermore, amongst the exchange rate, inflation and interest rates, the variable with the smallest mean value is interest rate with an average of 0.56 while its standard deviation is also the lowest at 17.98. All variables seem to be fairly distributed across series since their means, maximum and minimum values circle round their standard deviations. All variables included have 31 observations each.

Table 4.2: Unit Root Test

Variables	ADF Statistic	5% Critical Value	Order of Integration
BOP	-9.15	-2.97	I (1)
OILP	-4.84	-2.97	I (1)
EXC	-4.67	-2.97	I (1)
INFR	-3.69	-2.99	I (0)
INTR	-6.67	-2.97	I (1)

Source: Author's computation using E-views, 2018.

Table 4.2 shows the Augmented Dickey-Fuller test of a unit root. The results show that all variables are stationary after first differencing except for inflation rate which was stationary

at levels. This means that, all variables are integrated at I(1) while inflation is integrated at I(0), hence, the variables are of different levels of integration. The implication of this is that the choice of model for the analysis will be the Autoregressive Distributed Lag (ARDL) model if only the bound test shows that the variables are co-integrated or otherwise Vector Autoregressive model (VAR).

Table: 4.3 Bounds Test

F-Statistic	Degree of Freedom	P-value
7.712742	(4, 18)	0.0008

Source: Author's computation using E-views, 2018.

F-statistic is said to be significant if the probability of f-statistic is less than or equal to 0.05. From the result obtained above, the probability value of f-statistic is 0.0008 which is less than 0.05. This means that the explanatory variables are jointly significant in explaining the balance of payments at 5 percent level of significance. The results presented on the table 3 shows the F-statistic to be 7.71 while the p-value is 0.0008. The null hypothesis is that there is no cointegration between the variables in the model. Going by the p-value, we rejected the null hypothesis and hence concluded that there existed cointegration between the included variables.

Having made the choice of the model due to the lag suggestions by the Akaike Information Criterion (AIC) and the Schwarz Information Criterion (SIC), the ARDL model which is known as the conditional ECM is presented below:

Table 4.4 shows a short-run estimation of an error correction model. The result shows that lagged value of crude oil price has a coefficient of -0.0033 which means that there is a negative relationship between crude oil price and BOP, hence, a percent increase in the lagged value of crude oil prices will lead to a decrease of 0.003 percent in the current value BOP. This relationship is significant going by the p-value of 0.0482. The implication is that high oil revenue will make the economy rate of importation to be higher than the rate of exportation which will result in a fall in BOP position. That is, an increase in oil price will lead to a high demand for the Dollar which will depreciate the Naira and appreciate the Dollar. The result is in line with Alhassan and Kilishi (2016) and Eneji, et al (2016) who obtained that oil price is a key factor of macroeconomic instability in Nigeria.

Table 4.4: Conditional ECM

Variable	Coefficient
D((BOP)-1)	0.2973 (0.1875)
D((OILP)-1)	-0.0033** (0.0017)
D((EXC)-1)	-0.0002 (0.0015)
D((INFR)-1)	0.0046** (0.0018)
D((INTR)-1)	-0.0009 (0.0016)

$R^2 = 0.78$, Durbin-Watson-statistic = 1.79; Source: Author's computation using E-views, 2018.

The study also found a negative and insignificant relationship between exchange rates and balance of payments, a percent increase in the lagged value of exchange rate lead to a

decrease of 0.2 percent in the current value of BOP. The implication is that a decrease in the exchange rate is likely to promote a favorable balance of payments position in Nigeria. This finding confirms the Dutch disease theory which postulates that an increase in oil revenues will make Nigeria naira to be stronger against other nation currencies, thus leading to balance of payments disequilibrium (Milan, Otaviano, and Ekaterina, 2010). More so, the elasticity approach which is built on the Marshall-Lerner condition, asserts that exchange rate changes restore equilibrium in balance of payment (BOP) by devaluing a country's currency (Udede, 2015). The monetarist however, explained that exchange rate devaluation will only improve balance of payments condition in the long run as against short run argued by the elasticity approach (Udede 2015). According to the absorption approach to the theory of balance of payments, the correction of a deficit in the balance of payments by means of devaluation is possible if only the rate at which devaluation would induce increases in the national output of goods and services is greater than the propensity to absorb (Akatugba, 2018). This discovery strengthens the claims of Milan, Otaviano, and Ekaterina, 2010, Udede, 2015, Eme 2016, Akatugba, 2018 and Olisah 2018.

The study found that inflation rate has a significant positive relationship with the balance of payments. This is not as always expected because, in the real sense, people will expect that an increase in general price level will result to balance of payments deficit. The small coefficient size (0.0046) of inflation shows that a lower inflationary rate will promote the external sector economy and is significant. It implies that a moderately inflationary rate is essential for a favorable balance of payments position. This finding gives support to the structuralists theory of inflation which posits that inflation is essential for economic growth as well as lends support to the monetarist theory of inflation. The result obtained is contrary to the finding of Eme (2016), Akatugba (2018), and Olisah (2018) that inflation has adverse effect on the BOP.

Also, the result in Table 4.4 shows an inverse insignificant relationship between interest rate and balance of payments. The coefficient of interest rate is -0.0009 meaning that a rise in interest rate, would effect 0.0009 declines in the balance of payments. This finding confirms the Keynesian and classical theories of interest which postulate that at higher interest, there will be less borrowing which in turn leads to low capital and as such, low investment or production activities (goods and services) resulting to a decline in balance of payments positions. The implication is that a reduction in the rate of investments or production activities will result to a rise in the prices of available commodities in the economy thereby making these commodities more expensive and as such leads to a decline in the overall demand for them. The decline in the overall demand for export will then lead to unfavorable balance of payments position. This is in line with Udede (2015) and Olisah (2018) who concluded that interest rate should be low to ensure availability of credit to investors, and will in turn enhance domestic productivity which will increase the rate of export over import.

The coefficient of determination, (R^2) shows goodness of fit of the regression line or the amount. From the result, about 78% of the variations in the dependent variable is explained by the explanatory variables while the remaining 22% is capture by factors outside the model. Furthermore, the Durbin Watson statistic of 1.79 is within the region 1.75 to 2.50.

Table 4.5: Long-run Dynamics

Variable	Coefficient
OILP	0.0042 (0.0009)**
EXC	0.0023 (0.0004)**
INFR	0.0017 (0.0015)
INTR	-0.0016 (0.0014)

$R^2 = 0.13$, $D-W = 2.02$ F -statistic = 8.06, P -value = 0.04; Source: Author's computation using E-views, 2018.

From Table 4.5, oil price coefficient has a positive and significant relationship with balance of payments. However exchange rate as well as inflation rates both have positive relationship. Thus, exchange rate has a significant relationship with the BOP while inflation rate has no significant relationship with balance of payments. Meanwhile, interest rate maintains a negative relationship which is not significant.

The F-statistic shows that in the long run, the models are jointly significant in explaining the variations in the balance of payments in Nigeria, although the low R-squared value shows that there could be improvements on the variables.

5. Conclusion and Policy Implications

This study investigated oil price fluctuations and Nigerian balance of payments using data spanning from 1987-2017. The study employed the Auto Regression Distributive Lag (ARDL) technique of estimation in investigating the variables and found that crude oil price fluctuations had a significant impact on the balance of payment within the study period in Nigeria. The crude oil price and inflation rate were significant while exchange rate and interest rate were not significant factor that influenced the country's balance of payments position.

It was further discovered from the study that crude oil price, exchange rate and interest rate were negatively related to balance of payments, while inflation rate was positively related to balance of payments. It was discovered that the balance of payments has a long run relationship with all the variables included in the model. Based on the findings from this study, it is therefore concluded that oil price is a major factor of macroeconomic instability in Nigeria. It has negative influence on the country's balance of payment position due to over-dependence on oil revenue and poor performance of non-oil export. Exchange rate is a decreasing function of balance of payment as much as interest rate is. Furthermore, a moderately low inflationary rate is an increasing function of balance of payments.

Based on the findings the following are recommended; First, government should focus on diversification of the economy from oil to other sectors, such as the agricultural sector, service sector, trade, and commerce sector, tourism or recreational centers, etc. so as to have many export commodities and services which will open up different sources of revenue for the economy and reduce over-reliance on oil earnings and hence a favourable balance of payment position. This can be achieved by providing basic social amenities and

infrastructural facilities, protection of infant industries from foreign competitors by placing tariffs, embargo, licensing, etc. and appropriate government policies and incentives so as to boost productivity of the non-oil sector for export activities. Secondly, the government should also aim at a favorable exchange rate to avoid foreign goods inexpensive as against local products so as not to discourage exports as decreasing exchange rate promotes export. Since inflation was found to be beneficial to balance of payments, the government should adopt inflation control measures, this will help to keep a moderate rate of inflation and as such, increase the purchasing power of income. Among the instruments for inflation control are the monetary and fiscal policies. Finally, the Central Bank of Nigeria should give special directives to commercial banks on the level of interest in order to keep interest rate low. They should also ensure availability of credit to investors to enhance domestic productivity which will increase the rate of export over import and as such lead to a favorable balance of payments position.

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Real Exchange Rate Volatility and Sectoral Employment in Nigeria

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Abstract

This study investigated the effects of real exchange rate movements on sectoral employment in Nigeria between 1976 and 2016. The sectors of interest were the agricultural sector, manufacturing sector and the service sector. Error correction model (ECM) was used to investigate the objective of the study via two channels of export orientation channel and imported input channel. The empirical analysis results show that the manufacturing sector feel the greatest effect of exchange rate movement than the other two sectors. Considering the sector's adjustment rate to employment disequilibrium, this shows that manufacturing sector's employment adjust faster (45 per cent per year) than other two sectors followed by agricultural sector. Accordingly, this investigation recommends that manufacturing sector ought to be all around created and legitimate administration of naira ought to be sought after as an instrument to improve the Unemployment circumstance in Nigeria.

Keywords: Real Exchange Rate, Sectoral Employment, Error Correction Model, Export Orientation Channel, Imported Input Channel.

JEL Classification: J45

1. Introduction

The world is a global village where the economies are between associated straightforwardly or potentially in a roundabout way with each other through assets and goods market. These economies are of various dimension of advancements – some developed and others developing. The likelihood of smooth relationship among these economies in this manner relies upon a medium through which trade can be practiced. Foreign exchange plays this imperative job of exchange by guaranteeing the free stream of merchandise and ventures among the countries of the world. The price of foreign currency in terms of local currency monetary standards as far as nearby money (i.e. exchange rate) is in this manner critical to comprehend the development way of all countries of the world (Bastos, 2010),

Clearly, misalignments of exchange rate can result to yield withdrawal, in this way, offering approach to financial hardship. Aghion (2006) observationally offer proof that real exchange rate volatility can significantly affect long haul rate of profitability development, depending fundamentally on a country's level of financial development. For countries with relatively low levels of financial development, exchange rate volatility generally by and large lessens development, though whereas for financially advanced countries, there is no significant effect. Belke and Setzer (2003) likewise bolstered the case by Agion et al that the impact of variability of exchange rate is more felt in the developing countries than in the developed ones

There is a sensibly solid proof that the arrangement of exchange rate impacts the rate of development of per capita yield in low pay countries. Subsequently, Nigeria as a low pay open economy is required to be defenseless against misalignments of exchange rate.

One of the major macroeconomic objectives that can be upset by exchange rate volatility is business. Business is a critical subject of worry for each economy – be it developing or developed. The Unemployment circumstance in Nigeria has been a noteworthy concern. Unemployment rate has been on the expansion in Nigeria since 1970 to date. Unemployment rate ascended from 1.93 percent in 1970 to 23.9 percent in the year 2011. In this manner, government at all dimensions and policy makers have been endeavoring endeavors at improving the circumstance. Several macroeconomic policy measures have been actualized to improve efficiency in distinctive divisions of the economy with the end goal of advancing employment generation. Noticeable among these measures is the exchange rate policy, which has the ability to influence employment both directly and indirectly. In the literature several precise transmission channels through which exchange rate sway on work can be recognized. Among the various studies on employment, analysis of the impact of exchange rates on employment has gotten unimportant consideration. A portion of the current studies that have been done focused generally on the developed countries and non-African developing countries. It therefore becomes necessary to investigate the various channels through which exchange rate movement affects employment (Okonkwo, 2015). Consequently, this study identifies the potential channels through which exchange rate volatility affects employment in Nigeria, with particular focus on the manufacturing, agricultural and service sectors which together employ the largest percentage of the labour force

2. Literature Review

2.1 Theoretical Framework

The volatility of exchange rate is said to have negative impact on the on the export of the developing economies. As indicated by Mahmood and Ali (2011), volatility of exchange rate instigates volatility and hazard in venture choice with destabilizing impact on the macroeconomic performance Clark (1973) model is one of the theories that examine the relationship between the exchange rate volatility and trade flows. It accept an aggressive firm with no market control delivering just a single product which is sold to one foreign market and does not import any intermediate inputs. The firm is paid in foreign currency exports at the current exchange rate, which differs in an eccentric design, as there are

assumed to be no hedging possibilities, such as through forward sales of the foreign currency export sales, for example, through forward offers of the outside money send out deals. Besides, as a result of expenses in changing the size of creation, the firm settles on its generation choice ahead of time of the acknowledgment of the exchange rate and hence can't modify its yield in light of ideal or troublesome moves in the productivity of its exports emerging from developments in the exchange rate. In this circumstance, the changeability in the company's benefits emerges exclusively from the exchange rate, and where the supervisors of the firm are antagonistically influenced by hazard, more noteworthy unpredictability in the exchange rate – with no change in its average level leads to a reduction in output, and hence in exports, in order to reduce the exposure to risk. Grier and Smallwood (2007) presume that exchange rate unpredictability has a huge negative association with the export for developing countries and affirmed that there is no such impact for the advanced economies. Caglayan and Di (2008) credit this to the absence of appropriate money related devices in developing countries that organizations can use to fence against exchange rate hazard. Essentially, Koren and Szeidl (2003) propose that exchange rate unpredictability should influence exchange rate through the covariances of the exchange rate with other macroeconomic factors. Nnanna (2002) joins the impact of exchange rate precariousness on exports to unfriendly financial approach result, swelling, loan cost and development in cash supply.

2.2 Empirical Literature

Numerous studies have researched the impact of exchange rate on export. Extensively, talking, ponders on the impact of exchange rate unpredictability can be recognized regarding proportions of dangers and system of technique of analysis embraced.

Callabero and Corbo (1989) explored the impact of genuine exchange rate volatility on exports for six developing countries (Chile, Colombia, Peru, Philippines, Thailand and Turkey) and found that genuine exchange rate volatility reduced exports in the short-run and the outcomes were generously amplified over the long haul. Co-joining strategy was received by Singh, D. (2010). Looking at the ramifications of exchange rate unpredictability for India's export, the outcomes demonstrated that, exchange rate hazard had a critical unfavorable effect on exports.

Umaru (2013) watched the shakiness exchange rate as a determinant of exchange rate in Nigeria: affecting the needy variable, send out exchange; and at different occasions a negative impact. This proposes a flighty change in its esteem having a long-run impact on export and monetary development. Egert and Spirits (2005) endeavored to dissect the immediate effect of exchange rate unpredictability on the export performance of ten Central and Eastern European transition economies as well as indirect impact by means of changes in exchange rate routines. Aggregate as well as two-sided and sectoral trade streams were examined. To begin with, they broke down movements in exchange rate volatility connected to changes in the exchange rate routines and afterward, they utilized these progressions to build dummy variables that were incorporated into their export work. The outcomes recommend that the size and the course of the effect of for trade unpredictability and of routine changes on exports differed significantly crosswise over divisions and countries and those they might be identified with explicit periods.

Panel data approach was utilized by Omojimito (2010) in investigating the impact of exchange rate volatility on the exchange streams the trade flows of sub-Saharan Africa countries. Gauging exchange rate volatility by the coefficient of variation and utilizing data found that exchange rate volatility had a significantly negative and robust impact on trade flows. The study however, focused exclusively on the fixed exchange rate era and therefore did not investigate the likely impact of increased volatility during the flexible exchange rate period on trade flows. Nigeria's NEEDS document agreed that Nigeria's tariff and trade policies had been characterized by uncertainty and counter policies; to which the government established a market determined nominal exchange rate using the inter-bank foreign exchange market (IFEM), the autonomous foreign exchange market (AFEM), and the Dutch auction system (DAS) at different times to avoid overvaluation of the naira exchange rate and boost non-oil export. At the foreign exchange market, the naira depreciated consistently against major foreign currencies which in theory should have improved export performance as witnessed in China. Findings by De Graauwa (1988) and Caballero & Corbo (1989) of the effect of currency depreciation of individual member countries of the European Union on the export trade of those countries support this idea that currency depreciation affects export trade positively.

Among the empirical literatures that concluded a negative effect of exchange rate volatility on employment are studies by Branson and Love (1987), Revenga (1992), Burgess and Knetter (1996), Goldberg and Tracy (1999), Nucci and Pozzolo (2004), Frenkel (2004), Demir (2008), and Alexandre, et al (2009). While, studies like Ngandu (2008) concluded a positive relationship between exchange rate and general employment; Adewuyi (2005) concluded that that policy variables have no significant effect on the manufacturing wage and employment and Campa and Goldberg (1999), among others, concluded a weaker implications of exchange rates volatility for employment, but more pronounced effects for wages.

Contrary to the conclusion of the above literatures, Campa and Goldberg (1999) found weaker implications of exchange rates for employment, but more pronounced effects for wages, and this conclusion is directly opposite to the study by Revenga (1992). Campa and Goldberg (1999) argued that more substantial effects are picked up in industry wages, especially for industries characterized by low price-over-cost markup ratios, and in overtime wages and overtime employment. According to them, Industries with low price-over-cost markups and those with a less skilled workforce exhibit relatively larger employment elasticities but lower wage elasticities. Evidence in the study supports a statistically significant response of industry wages to exchange rate changes, and a very weak statistical relationship between numbers of jobs and employment and dollar movements.

Nonetheless, in opposition to the conclusion of the above literatures, Campa and Goldberg (1999), found weaker implications of exchange rates for employment. but more pronounced effects for wages. This conclusion is directly opposite to the study by Revenga (1992). Campa and Goldberg argued that more substantial effects are picked up in industry wages, especially for industries characterized by low price-over-cost markup ratios, and in overtime wages and overtime employment. According to them, Industries with low price-over-cost markups and those with a less skilled workforce exhibit relatively larger employment

elasticities but lower wage elasticities. Evidence in the study supports a statistically significant response of industry wages to exchange rate changes, and a very weak statistical relationship between numbers of jobs and employment and dollar movements.

In a more sectoral investigation, Ewing and Yang (2009) found a long-run relationship between exchange rate and manufacturing employment but no relationship with non-manufacturing employment. Consistent with Ewing and Yang is the study by Bastos and Wright (2010) on impact of exchange rate movements on wage determination in unionised labour markets. They found that organized labour has a rational incentive to impose lower wages in the face of a currency appreciation. In a more general study, Ngandu (2008) in his study of the South African economy, employing a General Equilibrium technique, claimed that whereas a partial equilibrium analysis that only focuses on the manufacturing sector might conclude that appreciation has a negative impact on employment, taking into consideration the economy-wide impacts, there can be an overall positive impact on employment from an appreciation. The four worst-affected sectors in terms of employment according to Ngandu include transport equipment, leather products, chemical products and footwear. The sectors that respond positively to the exchange rate include business services, other producers, other mining, and medical and other services.

Considering the scope and contradictory findings of the above literatures, most of the empirical studies carried out have focused more on the developed economies (particularly the U.S.) and non-African developing economies. Also, few studies exist yet on sectoral analysis as most focused on manufacturing industries. Thus, this study intends to fill these gaps in terms of focusing on Nigeria as its scope and extending the investigation to sectoral analysis.

3. Methodology

The data used for this study are combination of sectoral and aggregate annual data from 1976 to 2016. The sectors of interest are agricultural, manufacturing and service sectors. These sectors are chosen because they contribute the largest share of employment generation in the Nigeria labour market. The model is the basis for our estimation. Data employed are mainly secondary and sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, United Nations Statistics Division – National Accounts, Federal Office of Statistics, National Bureau of Statistics (NBS) Statistical Fact Sheets, National Account of Nigeria, National Manpower Board (NMB) Data File, National Rolling Plan and Nigerian National Petroleum Corporation (NNPC) Annual statistical Bulletin. All data are measured in real terms and in logarithmic terms.

Established from the theoretical framework, the real exchange rate affects employment through the export orientation channel defined as $(\text{exports}/\text{GDP}) \times \text{real exchange rate}$ and the imported input channel defined as $(\text{imports}/(\text{GDP}-\text{exports}+\text{imports})) \times \text{real exchange rate}$. These definitions are used in previous studies like Campa and Goldberg (1999) and Moonsoo Park (2009). Thus, the specification of the model for estimation in this study is that sectoral employment (L) measured by the number of employees in each sector is a function of export orientation channel (X); imported input channel (M); output demand proxied by the sectoral real output (Y^*); factor prices – represented by real oil prices for

foreign cost of capital (r^*) and interest rate for domestic cost of capital (r); and lagged dependent variable (L_{it-1}).

$$L_{it} = \alpha_0 + \alpha_1 X_{it} + \alpha_2 M_{it} + \alpha_3 Y_{it}^* + \alpha_4 r_t^* + \alpha_5 r_t + \alpha_6 L_{it-1} + \varepsilon_t$$

1

The constant term is represented by α_0 , where $\alpha_1 - \alpha_6$ are the coefficients to be estimated and ε_t is the stochastic error term. The a priori expectation in equation 14 above is that $\alpha_2, \alpha_3, \alpha_6 > 0$ meaning a positive relationship with employment and $\alpha_1, \alpha_4, \alpha_5 < 0$ meaning a negative relationship with employment. The “X” variable shows that as exchange rate depreciates (that is reduction in value), export is encouraged, and this leads to increase in output and employment. The “M” variable describes that as a result of depreciation, production capital input becomes more expensive, and this leads to contraction in output and employment. “Y*” depicts that as output increases, employment increases. “r*” shows that when there is an increase in energy price, cost of production increases and finally resulted to decrease in employment, the same reasoning goes for “r”; and “ L_{it-1} ” variable explains that whatever happens to present employment has its connection to the past situation of employment.

In order to arrive at a reliable estimate of the parameters ($\alpha_1 - \alpha_6$), this study investigates the unit root properties of the employed variables using the Augmented Dickey Fuller (ADF) test. After this is ascertained, we test for cointegration among the variables employed for each sector using the Engle-Granger test for cointegration.

After establishing cointegration among variables, this study examines the short-run relationship among variables under investigation using the Error Correction Model (ECM) technique.

The Error Correction Model (ECM) specification for this model is presented below.

$$\Delta L_{it} = \beta_0 + \sum_{k=0}^{\infty} \gamma_i \Delta X_{it-k} + \sum_{j=1}^{\infty} \varphi_j \Delta L_{it-j} + \rho \varepsilon_{it-1} + \mu_t \dots \dots \dots 2$$

$\rho < 1$

Where Δ denotes the first difference operator, all other variables are as initially defined except for “ X_{it} ” which is the vector of explanatory variables, ε_{t-1} is the one-period lagged series of labour demand and u_t is a random error term. The ECM accounts for the short-run dynamics of the model. The equation suggests that ΔL depends on ΔX , ΔL and also on the equilibrium error term. “ ρ ” from the ECM equation is expected to be negative (less than zero) and significant. This condition is necessary because when ρ is positive, it means the model is out of equilibrium, that is, L cannot adjust back to its equilibrium value. Therefore, this makes the model to lack the strength to predict what happens to the dependent variable as a result of variation in the explanatory variables. The absolute value of ρ decides how quickly the equilibrium is restored.

4. Results

In this segment, we present the experimental after effects of the study. The outcomes exhibited are time series tests, cointegration tests and the regression analyses. This is

intended to find out the propriety of the particular and decide the hidden properties of the information developing process. Following this, the experimental outcomes are displayed.

4.1 Unit Root Tests

In order to avoid the misleading characteristics of time series macroeconomic variables which in most cases exhibit non-stationarity in regression analysis, this study examines the time series characteristics of the variables under investigation using the Augmented Dickey Fuller (ADF) test. The reason for this is that non stationarity economic variables involved in economic analysis leads to violation of the classical assumptions of standard regression methods and thus, leads to spurious estimates.

The ADF test tests the null hypothesis that a time series variable Y_t is nonstationary, $I(1)$ against the alternative that it is stationary, $I(0)$. The general framework for the ADF test carried out in this study is presented below. During estimation, we estimated two models from the general framework where the first model suppresses the trend element, (t) and take on the constant term, β_1 and the second model estimates the general framework to accounts for both the constant and trend.

$$\Delta\gamma_t + \beta_1 + \beta_2t + \delta\gamma_{t-1} + \sum_{i=1}^m \alpha_i\Delta\gamma_{t-1} + \mu_t \dots\dots\dots 3$$

Where μ_t is a pure white noise error term and where represents the first difference of the variable of concern. The test here centers on investigating whether $\delta = 0$ (nonstationarity) for the null hypothesis as against $\delta < 0$ (stationarity).

Table 4.1: Results of Unit Root Tests

Variable	ADF				Order of Integration
	Without Trend		With Trend		
	Level	First Diff	Level	First Diff	
Log(A. Emp)	1.8847	-4.7409***	-1.0487	-6.3185***	I(1)
Log(M. Emp)	-1.1557	-3.6462***	-2.1376	-3.6034**	I(1)
Log(S. Emp)	0.3772	-4.0780***	-1.4286	-4.0695**	I(1)
Log(A. Q)	-1.8155	-4.9970***	-2.0943	-5.2647***	I(1)
Log(M. Q)	-2.9801*	-4.2767***	-2.4438	-4.8917***	I(1)
Log(S. Q)	-2.0638	-4.8063***	-2.8347	-5.1300***	I(1)
Log(X)	-1.1069	-5.7906***	-3.0229	-5.7555***	I(1)
Log(M)	-0.9436	-5.5042***	-2.9304	-5.4838***	I(1)
Log(r)	-1.4669	-4.8398***	-0.7421	-5.1109***	I(1)
Log(r*)	-0.9815	-6.1931***	-3.0502	-6.1312***	I(1)

*Notes: * , **and *** implies significance at 10%, 5% and 1% level respectively. Critical Values for ADF tests are the following:; In the model without trend: Level form: -3.6067 (1%), -2.9378 (5%) and -2.6069 (10%); First difference: -3.6117 (1%), -2.9399 (5%) and -2.6080 (19%); In the model with trend: Level form: -4.2092 (1%), -3.5279 (5%) and -3.1949 (19%); First difference: -4.2165 (1%), -3.5312 (5%) and -3.1968 (10%).*

The after effect of the unit root tests is displayed Table 4.1. The outcome demonstrates that every one of the factors over the three parts are stationary at first distinction meaning it is

I(1). This demonstrates the factors are not stationary at levels but rather in the wake of taking their first contrast, they end up stationary.

4.2 Cointegration Tests

Having set up the unit root properties of the variables, the mix of at least two nonstationary variables could anyway be stationary if these arrangement share a typical long-run harmony relationship. For this situation, these variables are said to be cointegrated. Hence, since time is running short arrangement qualities of the variables, this study further researches utilizing the Engle-Granger (EG) test, the presence of cointegration among variables of concern.

After estimating the regression in equation above and generated the residuals (μ_t), these residuals are thus subjected to the ADF test. The result showed that in the long-run, there exist cointegration among the variables of concern in all the three sectors. The ADF test statistic stood at -5.4362, -3.1388 and -4.7136 for agricultural, manufacturing and service sector respectively, against the critical values of -3.6067, -2.9378, and -2.6069 for 1 per cent, 5 per cent and 10 per cent level of significance respectively

4.3 Error Correction Results

To land at the tight fitted Error Correction Models (ECM) for all the sectors under consideration, we previously evaluated the over-parameterized models that empower us to erase lagged variables that are of no significance in our model. The ECM results for the three segments are exhibited in Table underneath.

Table 4.2: Parsimonious Error Correction Model

Variable	$\Delta L(\text{Agric})$	$\Delta L(\text{Manuf})$	$\Delta L(\text{Serv})$
<i>Intercept</i>	0.034 (3.354)	0.004 (0.287)	0.025 (1.291)
ΔX	0.022 (0.624)	-0.194 (-2.304)**	0.032 (0.362)
ΔM	-0.028 (-0.962)	0.181 (2.902)***	0.072 (1.289)
ΔY^*	0.010 (0.553)	(-1.280)***	0.110 (2.134)**
Δr^*	0.014 (0.589)	(1.010) 0.080	-0.067 (-1.182)
Δr	-0.016 (-0.560)	(1.748)* 0.542 (5.258)***	-0.007 (-0.148)
$\Delta X(-1)$			0.115 (2.094)**
$\Delta X(-2)$	0.184 (3.252)***		
$\Delta X(-3)$	-0.065 (-2.426)**	-0.245 (-3.143)***	
$\Delta X(-4)$		-0.279 (-4.731)***	-0.167

Variable	$\Delta L(\text{Agric})$	$\Delta L(\text{Manuf})$	$\Delta L(\text{Serv})$
$\Delta M(-1)$	-0.019 (-1.916)*		(-2.546)**
$\Delta M(-2)$	-0.128 (-2.663)**		
$\Delta M(-3)$		0.182 (2.504)**	
$\Delta M(-4)$			
$\Delta Y^*(-1)$	-0.050 (-2.577)**	0.120 (2.101)**	
$\Delta Y^*(-2)$			
$\Delta Y^*(-3)$			
$\Delta Y^*(-4)$			
$\Delta r^*(-1)$	-0.039 (-2.085)**	-0.299 (-4.505)***	
$\Delta r^*(-2)$	-0.090 (-3.476)***		-0.017 (-1.257)***
$\Delta r^*(-3)$	0.067 (2.402)**	0.107 (2.256)**	
$\Delta r^*(-4)$			
$\Delta r(-1)$		-0.146 (-2.809)**	-0.096 (-2.023)**
$\Delta r(-2)$		-0.170 (-3.238)***	-0.209 (-4.375)***
$\Delta r(-3)$	-0.056 (-2.759)***	-0.097 (-2.130)**	
$\Delta r(-4)$	-0.052 (-1.977)*		0.237 (1.193)
$\Delta L(-1)$	0.298 (1.268)	0.624 (4.217)***	0.270 (1.936)*
$\Delta L(-2)$		-0.487 (-4.259)***	-0.285 (-2.178)***
$e_{cm}(-1)$	-0.352 (-2.263)**		
R^2	0.653	0.819	0.671
$D.W$ Statistic	1.851	1.916	1.889

5. Conclusion and Recommendation

This study investigates the effects of real exchange rate movements on sectoral employment in Nigeria between 1976 and 2016. The sectors of interest are the agricultural sector, manufacturing sector and the service sector. The study utilized Error Correction Model (ECM) in achieving the target of the study by means of two channels of export orientation channel and imported input channel. The ECM results demonstrate that manufacturing sector feel the greatest effect of exchange rate movement followed by the agricultural sector and finally by service sector. Considering the sector's adjustment rate to employment disequilibrium, this study shows that manufacturing sector's employment adjust faster (45 per cent per year) than other two sectors followed by agricultural sector. Therefore, this study suggests that manufacturing sector should be well developed and proper management of naira should be pursued as a tool to ameliorate the unemployment situation in Nigeria.

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Evaluation of Attitudinal Risk of Homestead Fish Farmers in Kogi State, Nigeria

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Abstract

The study evaluates attitudinal risk of homestead fish farming in Kogi State, Nigeria. Specific objectives of the study are to describe the socio-economic characteristics of homestead fish farmers, estimate costs and returns associated with homestead farming, examine associated risk and mitigating strategies against risk and to determine the problems affecting homestead fish farming in the study area. A multistage sampling technique was used to select 210 fish farmers. Primary data were used. Descriptive statistics, cost and return concept, factor analysis were used to analyse the data. The results revealed that the mean age was 37.67years, 62.9% were male, and 70.5% of the famers were married. Majority (86.7%) had no extension contact. The total revenue per farm /per annum was ₦495,569.8. The risk associated with fish farming were drought ($x = 3.99$) and poor power supply ($x = 3.97$) while the strategies used in mitigating risk were Adequate contact with extension agents ($x = 4.93$) and breeding of improved breed of fingerlings($x = 4.89$). The major problems were inadequate extension service and high costs of fingerlings with agein value of 0.67 and 0.65 respectively. It was recommended that, there should be adequate extension contact in order to acquaint fish farmers with technical information to increase productivity and livelihood status.

Keywords: Fingerlings, Risk, Hormones and Vaccines

JEL Classification: D81, Q12

1. Introduction

Fish farming is becoming increasingly popular in Nigeria and it plays a significant role in augmenting protein supply. Fish protein is an essential part of human nutrition because of its biological significance. Therefore, homestead fish production plays an important role in

alleviating the condition of unemployment (Ala and Umar, 2002). As a result of conflicting geometric growth in population with the arithmetic growth in food production, prices of basic food items have gone up by at least 65 percent, and, in some scenarios, above 100 percent because human and material resources available were not fully utilized (Annon, 2008; Akoroda, 2009). It could be observed that lack of good fingerlings and quality feeds were one of the farmers' constraints to produce fishes in large quantity (Akolisa and Okonji, 2005). Nevertheless, the major concerns confronting many aspects of fish production are how to increase quantity and quality of fish production, poor sales of fish and fish products and so deepening poverty level of the people (Kanga, 2009). In the study area, for more than a decade the practice of fish cultivation has been on small-scale with little or no scope for expansion despite readily available market for fish product. Evidence showed that most of the fish farmers in the study area have economic power unlike other enterprises which are less capital intensive, thus creating a bandwagon of farmers with social capital. Several efforts, through interventions aimed at enhancing production of fish, have been put in place by both government and non-governmental organizations, but the results still remain a mirage as active farmers keep complaining of high attendant risks associated with the enterprise. Unlike uncertainty which is beyond farmers' control, risk is a situation that is tied to human error. In view of the above challenges, the objectives of the research were to; examine socio-economic characteristics of homestead fish farmers; estimate costs and returns associated with homestead fish farming; examine risk attitudes and mitigating strategies for homestead fish farming and problems affecting homestead fish farming in the study area.

The global level of fish supply is becoming insufficient as a result of human pressure; hence, food supply including fish is expected to triple to cater for this increase (FAO, 1999). The current fish demand in Nigeria is about 3.21 million tones and the current total production is about 1.2 million tones (FMARD, 2016). Therefore, the present situation calls for serious and urgent action on how to ensure sustainable and sufficient fish production. Transition from scarcity of fish cannot be achieved by only intensive fishing but rather it could be ameliorated by better management of fisheries resources and improved aquaculture practices.

2. Literature Review

2.1 Empirical studies on homestead fish farmers in Nigeria

Nigeria is one of the most popular countries in African with high demand for fish. The fish produced in the country cannot meet up with the current demand resulting in importation due to low yield (Abdulahi, 2012). The results revealed that there was significant association between age, level of education and adoption of new technologies in fish farming in the study area while sex, religion and marital status were not significantly associated with adoption of new technologies in the study area.

Edah *et al* (2011) examined the abundance and possible market characteristics of the Kpata fish market (Old Market) in Lokoja. Fishery products caught were mainly to meet domestic demand especially in Lokoja. Age distribution among fish mongers did not differ significantly ($p > 0.05$) as 63.1% of the fish mongers fell within the economic productive age group (18 to 55 years), less than 30% of the respondents were between the ages of 56 to

70 years and only 4.3% of the respondents fell within the step-down age group (71 to 100 years). Distribution of fish species as observed in the market were majorly fresh water species even though there were traces of brackish and marine fish species.

Yet, Okwuokenye and Ikoyo-Eweto (2016) investigated the socio-economic characteristics of fish farmers in Delta State, Nigeria, and revealed that years of residence in community, age, educational background, farm size, fish farmers membership experience and participation of farmers in groups activities were significant, indicating that they were experienced in the business. Age variation was significantly associated to farmer's behavior in accepting new techniques. According to Abelkwaku *et al.*, (2014), the age of fish farmers in the study was within the age range of 30-50 years which are still agile and active. Education can be formal and informal. However, Onumadu and Osahon (2014), reported that most of the fish farmers were literate and it could serve as an impetus in adopting improved fish technologies. Household size having a negative relationship was linked to increased consumption demand due to large family size. Okwuokenye and Ikoyo-Eweto (2016) described socio-economic characteristics of fish farmers in Delta state, Nigeria. The result revealed that the mean fish farm output and income was 164.60kg and N167,200 (\$1,045) respectively. Muhammad and Omotesho (2010) analyzed economics and determinants of fish farming in Kwara and Kogi States. The study used a population size of eighty-eight registered fish farmers in the Kwara and Kogi States. It showed that farmers produced an average of about 76Kg of fish per m². Net Farm Income to fish farming in the study area was estimated at about N5000 per m². Emokaro Odetola *et al.* (2015) estimated costs and returns of impact of cooperative society on fish farming commercialization in Lagos State, Nigeria and found that majority (50%) of the cooperative fish farmers used between ₦100,000 to ₦500,000 as initial investment while (56%) of the non-cooperative used the same amount as capital investment.

2.2 Previous Studies on Risk Attitude of Fish Farmers

Price risk: Closely associated with weather and other natural hazards is the risk of fish fluctuations. Casualty risk and property losses due to fire, flood, windstorms, theft, etc., are sources of risk in any business. Casualty losses can generally be covered by insurance; however, income may still be reduced by interruption of normal business activity that often follows a major loss.

Technological, Human/Personal, Institutional, Asset and Financial Risks as well as Risk Attitudes of Farmers: Various types of risk give rise to uncertainty in the mind of farmers regarding their ability to predict future. The degree of uncertainty, the consequences of various possible outcomes and personality of individuals will determine how best to behave under the circumstance and what strategies to adopt to minimize the effects of risks. Risk adverse farmers are the most cautious risk takers, but they do take some risks (Alabama Agric & Mechanical University, 2003). However, previous studies on associated risk and mitigating strategies against risk in homestead fish production, managers have a variety of mechanisms for managing risk. The best method(s) of managing risk depends upon the nature of the risk involved. Four general procedures for managing risk are: Avoidance: Avoidance is the process of structuring the business so that certain types of risk are nonexistent. For example in swine production, there are considerable risks associated with

farrowing operations including disease. Reduction: This is the process of lowering risks associated with the business venture. Consider the following example from the crop production. Diversification: Another common way for producers to reduce risk is to diversify across different enterprises.

3. Methodology

The study was carried out in Kogi State, with a projected population of 4, 850,200 NPC (2018) Located in the North-Central zone of Nigeria. Kogi State occupies a land area of about 32,440.00 km² and geographically located at Latitude 7° 47'N and Longitudes 6° 44'E. It is bounded by the following States: Edo and Ekiti (to the West), Kwara, Niger and Abuja (to the North), Nasarawa and Benue (to the East) Enugu, Anambra and Delta (to the South). The state serves as a confluence for the two most prominent rivers in Nigeria: River Niger and River Benue; and have the temperature of 22⁰C to 31⁰C with a typical savannah climate with two clearly marked seasons of wet season. Agriculture is one of the mainstays of people who live in Kogi State. They engage in farming and fishing. Kogi State is notable for cultivation of crops such as; cassava, yam, coffee, cocoa, cashew, maize, groundnut, melon and rice. This study focused on homestead fish farmers irrespective of the breed or variety they keep in Lokoja and Adavi Local government areas of Kogi State, because of the preponderance of homestead fish farmers.

The study employed the multi-stage sampling technique. The first stage involved convenient selection of one agricultural zone out of the available four zones namely, Koton-Karfe. The second stage involved purposive selection of two Local Government Areas (LGAs) viz: Lokoja and Adavi Local Government Areas (LGAs) of Kogi State where over 70% of homestead fish farmers in the state could be found and also due to readily available market demand. The third stage involved purposive selection of four communities from the selected LGAs due to the preponderance of active homestead fish farms. The fourth stage involved random selection of 210 representative sampling size *via* Yamane formula as adopted by Ibrahim (2016). Primary data were used for the study with personal interview and observation to elicit required information from target homestead fish farmers. Descriptive statistics was used to achieve objective 1, objective 2 was achieved using costs concept and income measure. Objective 3 and 4 were achieved using the factor analysis. Cost related to fish production were split into various cost concepts Z₁, Z₂ Q and P.

Cost Z₁. The following were included in cost Z₁.

- i. price of fingerlings
- ii. wages of human labour
- iii. price of feeds
- iv. price of water
- v. price of lime
- vi. price of fertilizer
- vii. price of vaccines
- viii. price of hormones
- ix. veterinary services

Cost Z₂: cost Z₁+Rent paid for leased in farm

Cost Q: Cost Z₁ + interest on the fixed capital excluding land + rent value on owned farm

Cost P: Cost Q + imputed value of family labour

Cost D: Cost P +10% of TVC as management cost

Income Measure: These are the returns over different cost concepts. Different income measures can be derived using the cost concepts. The following formulae were use:

1. Farm business income = Gross income – cost Z_1
2. Family labour income = Gross income – cost Q
3. Net income = Gross income – cost P
4. Farm investment income = Farm business in come \boxtimes imputed value of family labour OR Net income + imputed rental value of owned land + interest on owned fixed capital invested.

4. Results and Discussion

4.1. Socio-economic Characteristics of Respondents

From Table 4.1 the result revealed that majority (70.5%) of the respondents fell within the age ranges of 21-40 years which means that bulk of the respondents were within active age and thus participation in fish farming was likely to be high and only 2.9% were above 60 years. The mean age was 37.67. This is in consonance with the findings of Ekunwe and Emokaro (2009). About 62.9% of the respondents were males. It can also be justified by the assertion of Brummett (2010) who stated that fish farming activities were mostly dominated by men. Majority (70.5%) of the respondents were married. The high number of married respondents could increase the release of family labour, thus making more hands available for productive activities on respondents' fish farms. Majority 89% of the respondents had household size of 1-5. The mean household size was 5 persons. This implies that the respondents in the study had moderate household members which could enhance cheap source of labour. This supports the result of Oladejo (2010), which reported that 83% of the small scale catfish farmers in Ido LGA of Oyo State claimed between 1 – 6 members within their households. Majority of the fish farmers in the study had one form of educational attainment or the other: 59.0% of the respondents had tertiary education. This implies that the community was literate fish farming community thus, there would be increase in adoption of modern technologies for fish farming. More than half (53.3%) of the respondents acquired their land through purchase. This finding disagree with the findings of Godson-Ibeji *et al.* (2016) who reported that majority of farmers in that study acquired their land through inheritance. About 46% of the respondents had 6 - 10 years of fish farming experience. The mean farming experience was 7. It could therefore be suggested that most of the farmers in the study had adequate farming experience which would help them to utilize their resources efficiently.

Furthermore, use of extension agents to farmers has positive influence as they help to disseminate information and innovations to farmers. The results show that majority (86.7%) of the respondents did not have access to extension agents. Extension contact is an essential tool for adoption of modern technologies and effective communication system that encourage increase in productivity of any agricultural enterprise. This implies that fish farmers in the study area had no access to recent technologies on best fish rearing practices and that would greatly affect their output level. This is in agreement with the finding of Zaknayiba and Tanko (2013) who reported that farmers in their study did not have access to

extension services, an indication that most of the farmers did not have access to new innovations in the studied area. Still on the results of our study, it was revealed that majority (77.1%) of the respondents were not members of a co-operative. This implies that a high percentage of the fish farmers in the study were not members of cooperative society which might reduce access to micro credit as lending agencies would prefer to give credit to cooperative societies rather than individuals as group lending is known to have a high repayment rate. Family labour accounted for 32.4% of labour used while 30.5% of the farmers used both family and hired labour, and this could be an indication that most of the farmers' family members were vulnerable and could not carry out most of the fish farming operations due to its drudgery nature.

Table 4.1: Distribution of respondents according to socio –economics characteristics

	Frequency	Percentage
<i>Age</i>		
21-40	148	70.5
41-60	56	26.7
>60	6	2.9
Mean= 37.67		
<i>Gender</i>		
Male	132	62.9
Female	78	37.1
<i>Marital Status</i>		
Single	54	25.7
Married	148	70.5
Divorce	8	3.9
<i>Household Size</i>		
1-5	187	89.0
6-10	23	11.0
Mean = 5		
<i>Educational Status</i>		
Primary	24	11.4
Secondary	44	21.0
Tertiary	124	59.0
Quranic	18	8.6
<i>Mode of Land Acquisitions</i>		
Inheritance	72	34.3
Purchase	112	53.3
Rent	26	12.4
<i>Farming experience</i>		
1-5	66	31.4
6-10	98	46.7
11-15	26	10.8
15 above	20	9.5
Mean = 7		

	Frequency	Percentage
<i>Extension Contact</i>		
Yes	28	13.3
No	182	86.7
<i>Membership</i>		
Member	24	22.9
non-member	81	77.1
<i>Labour Used</i>		
Family	68	32.4
Hired	60	28.6
Communal	18	8.6
Family and Hired	64	30.5

Source: Field Survey, 2018

4.2 Analysis of Costs and Returns of Fish Production

The result in Table 4.2 shows the cost and returns estimates of fish production in the study area. The total revenue accrued from fish output per fish farm was ₦495,569.85 with the total cost of production been ₦223,153.79: total variable cost and fixed cost been ₦127,430.24 and ₦ 5,723.55, respectively. The cost of fingerlings accounted for the highest amount (₦50,135.00) of the cost of production. However, the variable cost accounted for the chunk of the cost of production incurred in fish production in the study area when compared to the fixed cost. The enterprise recorded a net farm income of ₦356,776.09 and a gross margin of ₦368,139.61 per farm. Therefore, based on income measures, it can be inferred that fish farming enterprise was profitable in the study area. This corroborate with the findings of Olukosi *et al.* (2006).

Table 4.2 Cost and return analysis of fish farming in the study area

Item	Average amount (₦/farm)
<i>Variable Cost</i>	
Fingerlings	50,135.00
Wages of family labour	14,250.35
Wages of hired labour	10,500.00
Feed	14,600.35
Water	20,000.00
Hormone	1,999.00
Vaccine	2,159.00
Fertilizer	3,650.13
Lime	2,150.25
Veterinary service	2,140.15
Transportation	4,596.00
Storage	1,250.01
Total Variable Cost	127,430.24

Item	Average amount (₦/farm)
<i>Fixed Cost</i>	
Pond	59,250.00
Pumping machine	14,300.00
Fishing net	5,250.00
Interest on fixed capital items	1,500.10
Rent on land (lease in)	1,500.15
Economic rent on land (owned land)	1,450.28
Imputed managerial cost (10% of TVC)	12,743.02
Total Fixed Cost	95,723.55
Total Cost	223,153.79
Total Revenue	495,569.85
<i>Cost Concepts</i>	
Cost Z_1	121,592.98
Cost Z_2	123,093.13
Cost Q	124,543.41
Cost P	138,793.76
<i>Income Measures</i>	
Family business income	373,976.87
Family labour income	371,026.44
Net income	356,776.09
Farm investment income	362,676.90

Source; Field survey data, 2018

4.3. Associated Risk Homestead Fish Farming

The result in Table 4.3 shows that, fish farmers in the study area identified drought ($X = 3.99$), poor power supply ($X = 3.97$) and disease outbreak, ($X = 3.49$) as major risks associated with fish farming and were ranked 1st, 2nd, and 3rd respectively. This means that water is one of the major determinants of fish farming. The respondents also identified flood and weather vagaries as the less severe risk associated with fish production in the study area and were ranked 5th and 6th.

Table 4.3: Distribution of Respondents according to Risk Associated with Fish Farming

Associated Risk in fish farming	Mean	Varimax rotated component matrix	
		Systematic Risk	Unsystematic Risk
Flood (C1)	2.72 (6 th)	0.50	
Disease outbreak (C2)	3.49 (3 rd)	0.59	
Weather	2.72 (6 th)	0.50	

Associated Risk in fish farming	Mean	Varimax rotated component matrix	
		Systematic Risk	Unsystematic Risk
vagaries (C3)			
Drought	3.99 (1 th)		0.89
Power supply(C4)	3.97 (2 nd)		0.78
Poor road network(C3)	3.40 (5 th)		0.69
Pest and disease (C1)	3.49 (3 rd)		0.59

Source: Field survey, 2018

4.4 Risk Mitigating Strategies in Homestead Fish Farming

Table 4.4 shows the various strategies used by respondents in mitigating risk were as follows: Adequate contact with extension agents for information on risk management, breeding of improved resistant breed of fingerlings, and use of recommended feeds which is ranked 1st 2nd and 3rd while mixed farming is ranked last 9th.

Table 4.4: Mean score distribution of mitigating strategies against risk

Strategies	Mean Score	Remarks	Rank
Farming insurance	1.90	Less Severe	7 th
Non-farming business	1.89	Less Severe	8 th
Mixed farming	1.70	Less Severe	9 th
Used of qualitative medication measure	3.60	Severe	4 th
Adequate qualitative veterinary measure	2.51	Severe	5 th
Breeding of improved fingerling	4.89	Severe	2 nd
Adequate contact with extension agent for information on risk management	4.93	Severe	1 st
Use of recommended feeds	3.99	Severe	3 rd
Borrowing of money from lending institution	2.23	Less severe	6 th

Source: Field Survey, 2018

4.4 Constraints Affecting Fish Farming

The result in Table 4.5 revealed that inadequate extension service, ($X = 4.59$), high cost of fingerlings, ($X = 4.57$), storage facility problem, ($X = 4.55$), price fluctuation ($X = 4.54$), and inadequate capital, ($X = 4.40$) were the highly severe problems and they were ranked 1st, 2nd, 3rd, 4th and 6th respectively and poaching was identified as the less severe problems and ranked 19th.

Table 4.5: Factors constraining fish farmers in the studied area

Constraining factors	Mean	Varimax rotated component matrix			
		Market constraint	Infrastructure constraint	Credit constraint	Institutional constraint
Market problem (C3)	3.86 (12 th)	0.70			
Pest and diseases (C8)	3.61 (15 th)	0.69			
High cost of fingerlings (C9)	4.57 (2 nd)	0.65			
Price fluctuation (C11)	4.54 (4 th)	0.62			
Water problem (C1)	3.64 (14 th)		0.82		
Poor road network (C4)	4.23 (6 th)		0.73		
Flood and drought (C2)	3.25 (18 th)		0.70		
Poaching (C2)	3.19 (19 th)		0.65		
Poor power supply (C2)	4.13. (9 th)		0.62		
High transportation cost (C11)	4.19 (8 th)		0.59		
Inadequate capital (C1)	4.40 (5 th)			0.68	
Limited access to credit (C3)	3.49 (16 th)			0.57	
Problem of land tenure system (C5)	3.72 (13 th)				0.74
Poor government policy(C7)	4.21 (7 th)				0.70
Research problem (C2)	3.47 (16 th)				0.68
Inadequate extension services (C10)	4.59 (1 st)				0.67
High labour cost (C1)	3.96 (11 th)				0.55
Storage facility problem	4.55 (3 rd)				0.63
Predators	4.0 (10 th)				0.42

Source: Field survey, 2018

5. Conclusion and Recommendations

Most of the farmers were within their active age with sustainable household size which is a precursor for healthy farm family. The enterprise was found to be male dominated, majority of the fish farmers were found to be educated and fish enterprise was found to be profitable. Adequate extension visits found to be effective means of risk mitigation and inadequate extension contact was ranked first in terms of constraints faced by the respondents.

Based on the findings, the following recommendations were drawn:

- i. Inadequate extension services rank first in terms of constraints. Therefore, effort should be geared towards provision of extension services in order to acquaint fish farmers with technical information to increase their productivity
- ii. Despite the cost of fingerling, farmers should acquire their fingerlings from a reliable source to maximize output with little input.
- iii. Farmers should join cooperative societies to help them share ideas and teach themselves better ways of maximizing profit and for easy access to credit facilities from government interventions.

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Impact of Micro Finance Bank on Women Entrepreneurial Development in Fufore Local Government Area, Adamawa State Nigeria

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Abstract

There are series of microfinance programme and policies put in place by Nigerian government to alleviate the rate of poverty through empowering people to increase access to credit facilities. The paper tries to evaluate the impact of Fufore Micro Finance Bank (FMFB) on women entrepreneurial development. Among the objective of this study was to examine the impact of FMFB in contributing towards women economic and financial sustainability. The problem of the research emerged out of the need to assess the extent to which FMFB contributed to women entrepreneurial development. Descriptive study was used. Simple percentages and chi square were used for data analysis. The study found that women entrepreneurs knew about FMFB existence and the value of X^2_{cal} is greater than the X^2_{tab} , which indicates a positive response of FMFB. The FMFB had also influenced positively in promoting socio-economic life of women entrepreneurs. The study recommends that FMFB should come up with strategies to attract more investors and women participation in entrepreneurial activities and encourage women self-reliance and financial sustainability in Fufore.

Keywords: Credit Unions, Entrepreneurship, Micro Finance, Poverty.

JEL Classification: E50; E59; G21; H81; I38; J16; J24

1. Introduction

Reducing the circle of poverty and attaining sustainable development has eluded developing countries. Nigeria, like many other developing countries, has been making effort to accelerate the pace of her economic development by putting in place programme to alleviate the rate of poverty through empowering people and improving their access to factors of production, especially credit. Therefore, to increase the flow of financial services in the rural areas, Nigerian government has, in the past initiated a series of micro/rural credit programmes and policies that were targeted at the poor. Among these programmes were the

rural banking programme, establishment of Nigerian Agricultural Cooperative Bank (NACB). National Directorate of Employment (NDE), Peoples Bank of Nigeria (PBN), Community Banks (CBs). Family Advancement Program (FEAP), National Poverty Eradication Program (NAPEP), etc. The need to increase financial services in Nigerian rural areas and alleviate ever-increasing incidence of rural poverty, prompted the CBN to initiate well-focused and appropriate policies. The aim of these policies is to expand financial infrastructure, harmonize operating standards and provide platform for evolution of microfinance institutions. It is true that, women entrepreneurship would be significantly improved through the provision of microfinance services (Adeyemi, 2008).

The introduction of microfinance policy and framework on 15th December 2005, brings all the existing informal institutions that serve 65% of the Nigerian population under CBN supervision. The policy also transforms to Community Banks (CBs) on meeting the new capital requirement for Microfinance Banks (MFBs). Microfinance banks have been established to promote self-reliance, self-esteem and make financial services accessible to larger segment of productive Nigerian population which otherwise would have little or no access to financial services. Presently, there are many microfinance banks and community banks operating across states and local government areas. These operating units aim at improving micro small and medium entrepreneurs, eliminating gender disparity and improving women's access to financial service, (Akinboyo, 2007). Statistically, women constitute more than 50% of Nigerian population and out of this; only about 35% of them are involved in entrepreneurship, which can be under the form of micro, small, medium and large enterprises (Tarfa, 2011). These enterprises usually tend to have the flexibility and innovativeness that are critical business issues in feminism (Emmanuel and Daniya 2012). In Nigeria, irrespective of women's physical population, educational, economic and social status, they are not perfectly represented in policy making process, especially in matters of business and man power development, (Faseun and Bewayo, 2012). However, given the dynamic nature of Nigeria, a number of changes have emerged, including the recognition of the potential of women and their contribution to the economy. The objective of this study was to examine the impact of FMFB in contributing towards financial sustainability and women economic development. As Mordi (2010) observes that traditional roles occupied by the Nigerian woman in the family are changing as a result of changes in family configuration and setting which has allowed women to undertake more practical and functional roles within the society. The question in this research however, is to ascertain the fact whether micro finance and community banks have helped in financial sustainability and entrepreneurial development especially concerning women.

2. Literature Review

This section is mainly concerned with review of relevant literature to the study. Microfinance banks play a vital role in promoting socio economic development of women because viable approach to sustainable growth and development lies in the financial sector and economic advancement of women and rural areas. Microfinance or micro credit structures are essential for development of rural areas in consideration of the fact that development concentrated in urban centers in this country. Ubom (2013) opined that provision of microfinance made a positive impact on individual household's budget and has

changed the quality of lives of millions of women in developing nations. Adeyanju (2012) declared that, microfinance bank provides the means to generate income that gradually leads to sustainable development and provide the drive to develop “broad access” to financial resources crucial to the poor (among whom women are the majority) in order to provide basic requirements for sustainable economic development. Microfinance institutions have rapidly evolved in the last decade and have been able to enhance socio economic activities of rural people and women through the following ways:

Easy access to banking services: Establishment of Microfinance institutions in both rural and urban areas give easy access to banking services than when located in far distant places. Monsot (2005) opined that microfinance banks make credit directly available to the very poor thereby enhancing their self-sufficiency. The institutions have reached out to many disadvantaged micro entrepreneurs and have them to build operational and financial self-sufficiency. The idea behind microfinance was to bring at doorstep, banking services to rural and low-income segment of the society who cannot meet the requirement of orthodox commercial banks. According to the CBN (2005), microfinance is about providing services to the poor who are traditionally not served by conventional financial institutions and for easy access to banking and to help Nigerian women and poor to generate significant income or more entrepreneurial activities in the country,

Encouraging rural savings: Apart from prompting self-reliance and economic independence as well as breaking vicious circle of rural poverty, encouragement of rural savings has other significant advantages. Succinctly put, saving goes a long way in discouraging unproductive household consumption in rural areas and increases their resources base and bargaining position. By deferment of current consumption through savings, rural dwellers and women become more prudent in expending their hard-earned income investment.

Encourage self-reliance: The CBN (2005) reported that “the latent capacity of women for entrepreneurship would be significantly enhanced through the provision of micro loan to enable them engage in economic activities and to be more self reliant. In addition, rural dwellers, comprising women, need technical and financial assistance; need more funds and obviously financial and economic advice. Microfinance bank offers advisory service to its customers on current business trends. More so the CBN reports on microfinance institutions state that agriculture and small business were relatively large recipients of the bank’s loan facilities while significant amount also went to restaurant business, cottage industries and substantial amount to small-scale enterprises engaged in manufacturing and transportation (CBN, 2001). Many organizations like the World Bank, UNDP, USAID, Canadian, Swedish and German Governments have all made funds available to microfinance in order to reduce poverty and enhance self-reliance (Iheduru 2002).

Alleviation of poverty: In a paper presented by Iheduru (2002) he established that it has been estimated that women comprised nearly 74% of the 19.2 million of the world’s poorest people been served by microfinance institution. It is also reported in a survey carried out by United Nations Capital Development Fund (UNCFD) that out of 29 microfinance institutions, approximately 60% of these institution clients were women. Moreover, with microfinance, the level of women poverty has decreased to the minimal level. Micro-credit delivery of microfinance institutions gives greater business opportunities, economic

independence as well as sustainable development in women economic activities. According to Gbandi and Amissah (2014) microfinance clients are typically self employed, low income entrepreneur in both urban and rural areas. Clients are often traders, street vendors, small farmers, service providers, artisans and small producers such as black smiths and tailors. Usually their activities provide a stable source of income, although they are poor but generally not considered to be poorest of the poor.

Financing entrepreneurial activities: Clients of microfinance are often peasant farmers, petty traders, artisans, tailors, service providers, etc. Microfinance banks help existing business of their clients to grow or diversify and thus encourage self- sufficiency and to live above poverty level. In the findings presented at the international conference on administration and business, it was concluded that microfinance institutions, especially in Nigeria, were identified to be one of the key players in the financial industry that have positively affected individuals, business organizations, and other financial institutions. More so, microfinance banks contribute to entrepreneurial development with the help of external funding from bilateral and multilateral organizations. It is expected that with the current reforms put in place by the federal government through its regulatory authorities, microfinance institutions will be able to compete favorably in the global market and gainfully increase entrepreneurship development among women.

3. Methodology

3.1 Data

This study used both descriptive and inferential analysis to analyze its data. The descriptive analysis took the form of simple percentage, average and tables. While the inferential analysis deals with the chi square. 90 questionnaires were administered, where the questions were designed to address the research objectives and hypothesis. The data collected were analyzed using simple percentage and chi square to determine the impact of Fufore Micro Finance Bank on women entrepreneurship development of the group. In the course of the study, 90 target population were identified in the study area that comprised of women of different skills.

3.2 Population of the Study

For the purpose of this paper, four women associations in metropolis were selected based on their patronage in terms of loan collection for the period of 2015 – 2017. The population was examined to provide evidence and test the proposition that Fufore Micro Finance Bank was a relevant institution for economic and entrepreneurial advancement of women. The names of these associations were *Kauna Women Association*, *Mandimademso Women Association*, *Albarka Women Association* and *Tikkise Association of Women*. Therefore, the entire population selected for this paper was 140 women entrepreneurs

3.3 Sampling Size

Sampling is the process of selecting a given number of any parts of population for obtaining information for generalization about a larger population. For purpose of this study, the sample size selected for the study areas included *Kauna Women Association*, *Mandimademso Women Association*, *Albarka Women Association* and *Tikkise Association*

of Women.. The researcher made use of the formula by Yamane (1964), given below to determine the respondent size. The formula is as follows:

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

Where:

n = Sample size

N = Size of population

E = Precision level

Therefore:

$$n = \frac{140}{1 + 140 (0.05)^2}$$

$$n = \frac{140}{1 + 0.35}$$

$$n = \frac{140}{1.35} = 103$$

3.4 Sampling Techniques

The sampling technique that was adopted for the purpose of this study was simple random sampling technique. This is one of the methods of probability sampling in which an individual chosen at random from the population will give every individual in the population an equal chance of being selected.

The distribution of questionnaires to the staff was determined using the bowlers, proportion allocation formula which is given as:

$$n = \frac{n1(n)}{N}$$

Where n= the sample size of the study

n1=the proportion of each element

N=the population for the study

Through substitution of values from the above formula:

$$\text{Bursary} = \frac{30 \times 103}{140} = 22$$

$$\text{Central store} = \frac{35 \times 103}{140} = 26$$

$$\text{Marketing} = \frac{39 \times 103}{140} = 29$$

$$\text{Marketing} = \frac{36 \times 103}{140} = 26$$

$$\text{Therefore} = 22 + 26 + 29 + 26 = 103$$

Table 3.1: showing the sampling techniques

S/No	Groups	Respondents
1	<i>Kauna women</i>	22
2	<i>Mandimademso</i>	26
3	<i>Albarka women</i>	29
4	<i>Tikkise women</i>	26
	Total	103

Source; compile by the researcher 2017

3.5 Hypothesis

Ho: Fufore micro finance bank has not influenced positively on the women entrepreneurial development.

4. Results and Discussion

4.1 Descriptive Statistics

This section focuses on presentation, analysis and discussion of results generated from association of women entrepreneurship in Fufore metropolis. The primary instrument for this research exercise was questionnaire. One hundred and three (103) copies of questionnaire administered to the women associations in Fufore metropolis out of which ninety (90) were returned. Out of the returned, seventy seven (77) copies were found to be useful representing response rate of seventy five percent (75%). Below are the data presented in frequency tables;

Table 4.1: Responses of the respondents on awareness of the existence of the Fufore Micro Finance Bank (FMFB)

Responses	Frequency	Percentage %
Yes	77	100
No	0	0
Total	77	100

Source: field survey, 2017

Table 4.1 depicts that, all the respondents agreed that they were aware of the existence of (FMFB). It is discernible that the sample respondents had sufficient knowledge about the bank and its existence.

Table 4.2: Respondent's responses on their membership of the association

Responses	Frequency	Percentage %
Yes	77	100
No	0	0
Total	77	100

Source: field survey, 2017

The data presented in Table 4.2 reveals that 100% of the respondents were members from different women associations within Fufore.

Table 4.3: Respondent's responses on Patronizing Services of Fufore Micro Finance Bank

Responses	Frequency	Percentage %
Yes	58	75.5
No	19	24.5
Total	77	100

Source: field survey, 2017

Table 4.3 reveals that 75.5% of the respondents had an account each with Fufore Micro Finance Bank and patronized some of its services, 24.5% constituted those that had never patronized Fufore Micro Finance Bank services.

Table 4.4: Respondent's responses on association's ability to collect loan from this Bank

Responses	Frequency	Percentage %
Twice or more	56	72.7
Once	15	19.5
No response	6	7.8
Total	77	100

Source: field survey, 2017

It can be seen from Table 4.4 that 56 of the 77 respondents (representing 72.7%) admitted that they had collected loans, at least twice or more in a year and 19.5% collected loans only once in a year from their community bank. While 7.8%, remained neutral without responding.

Table 4.5: Opinion respondent's responses on loan facilities sufficiency

Responses	Frequency	Percentage %
Yes	49	63.6
No	28	36.4
Total	77	100

Source: field survey, 2017

Table 4.5 shows that 63.6% of the respondents held the opinion that the credit facilities were available whereas 36.4% of the respondents disagreed, by saying that credit facilities were not available.

Table 4.6: Respondent's responses on business improvement from loan granted by Fufore Micro Finance Bank

Responses	Frequency	Percentage %
Yes	60	77.9
No	17	22.1
Total	77	100

Source: field survey, 2017

From Table 4.6 it reveals that 77.9% of the respondents agreed that loans from micro finance bank improved their entrepreneurial activities remarkably. 22.1% had negative responses. Majority of these respondents also testified that micro-credit (loan) from community banks facilitated their business activities and contributed to their increased standard of living through business expansion by diversifying into other businesses.

Table 4.7: Opinion of the respondent on how FMFB affects their socio-economic life

Responses	Frequency	Percentage %
Positively	65	84.4
Negatively	5	6.5
No response	7	9.1
Total	77	100

Source: field survey, 2017

Table 4.7 reveals that 84.4% of the total respondents strongly agreed that micro-credit disbursement of community bank uplifted their living standard to an optimum level but on

the contrary, 6.5% disagreed that there was no significant improvement in their socio-economic status. Seven of the respondents representing 9.1% of the total respondents remained neutral without responding to the question.

Table 4.8: Opinion of respondents on how appropriate FMFB policies are on women entrepreneurial empowerment

Responses	Frequency	Percentage %
Yes	54	70.1
No	23	29.9
Total	77	100

Source: field survey, 2017

Table 4.8 reveals that 70.1% considered (FMFB) policies appropriate for small and medium women entrepreneurs. While 29.9% of the respondents believed that the policies were not meant for improving women's access to financial services.

Table 4.9: Respondent's responses on problems facing their in businesses

Responses	Frequency	Percentage %
Inadequate capital	40	51.9
Bad debt	20	26
Social and economic factor	10	12.9
No response	7	9.2
Total	77	100

Source: field survey, 2017

Table 4.9 shows that 51.9% of the respondents were with the opinion that inadequate capital was the major challenge they were facing in business. Although 26% believed that excessive bad debt was a serious obstacle affecting entrepreneurial development. While 12.9% expressed that social and economic factors were among the problem affecting entrepreneurs. Seven (7) respondents representing 9.2% remained neutral without responding.

4.2 Inferential analysis

The chi square table below was use to determine the impact of Fufore Micro Finance Bank (FMFB) on the women entrepreneurship development of the group.

Categories	f_o	f_e	$f_o - f_e$	$(f_o - f_e)^2$	$\frac{\sum(f_o - f_e)^2}{f_e}$
1	77	38.5	38.5	1482.25	38.5
2	77	38.5	38.5	1482.25	38.5
3	58	38.5	19.5	380.25	9.9
4	49	38.5	10.5	110.25	2.9
5	60	38.5	21.5	472.25	12.3
6	54	38.5	15.5	240.25	6.2
7	0	38.5	-38.5	1482.25	38.4
8	0	38.5	-38.5	1482.25	38.5
9	19	38.5	19.5	380.25	9.9
10	28	38.5	-10.5	110.25	2.9
11	17	38.5	-21.5	472.25	12.3
12	23	38.5	-15.5	240.25	6.2
Total	462		0		216.6

$$X^2 = \frac{\sum(f_o - f_e)^2}{f_e}$$

$$df = 12 - 1 = 11$$

$$X^2_{cal} = 216.6 \quad X^2_{tab} = 19.7$$

Since X^2 calculated is greater than X^2 tabulated, we reject the null hypothesis and accept that community bank has influenced women entrepreneurial development in Fufore Local Government Area. It is apparent from the foregoing analysis that the Fufore Micro Finance Bank has impacted positively on women entrepreneurial development. This means that FMFB has played significant role in promoting entrepreneurship among women. As you can see from the analysis, 100% of the respondents knew about the existence of FMFB. This might be because of its accessibility that gave opportunities to make financial services accessible to large segment of the society.

More so, the patronage of the bank's services from the foregoing analysis was high. About 75.5% of the respondents patronized FMFB services. This also reveals the efficiency and easy accessibility of FMFB services to micro small and medium entrepreneurs. The analyzed data also indicated that FMFB policies were excellent in poverty reduction and women empowerment. This was by placing vital financial resources in the hands of both rural and urban women that otherwise would not be available to them. This however helped them to increase their entrepreneurial activities and become self-reliant and thus raise their living standard.

5. Conclusion and Recommendation

As seen in the previous sections of this study, the respondents were aware of the existence of the community bank in the area and indicated that they belonged to an association. Majority of them had patronized the community bank in that area and agreed that there was improvement in their business with the loan collected. Since X^2 calculated is greater than X^2 tabulated, it is apparent from the foregoing analysis that the Fufore Micro Bank has impacted positively on women entrepreneurial development. This however helped them to increase their entrepreneurial activities and become self-reliant and thus raise their living standard.

Based on the findings of the study, the following recommendations are made: The policies of the FMFB as guided by the Central Bank should be maintained with increased capacity on lending powers to make available finances for the success of entrepreneurship development; Fufore Microfinance Bank should initiate sensitization programme directed at rural areas, for instance, public seminars could be held in rural areas to give them proper orientation on activities of the bank and how it could help them to improve their business; Poverty reduction can effectively be achieved in rural household provided women are given the opportunity to obtain credit facilities and be self-reliant; and high level of investment in the community and microfinance banking system should be encouraged with a view to effectively realize the spread and establishment of community banks in all nooks and crannies of the country.

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Food Insecurity and Coping Strategies among Rural Households in Niger State, Nigeria

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Abstract

The study aimed to assess food insecurity and coping strategies adopted by rural households in Niger State, Nigeria. The research adopts a sample size of 104 rural household heads from three Local Government Areas drawn from three agricultural zones of the State. Food insecurity index was used to determine the food insecurity status of the rural households, while universal coping strategy index was used to determine the different strategies adopted by the rural households faced with problem of food insecurity. Food insecurity index result revealed that 48% of the rural household heads in Niger State, Nigeria were food insecure, while 52% were food secure with a per capita household consumption of 2,243 kcal and per capita requirement of 2,474 kcal, indicating that the State was facing food insecurity issues. Rural households in Niger State, Nigeria adopted seven coping strategies in order to cope with food shortage, which included eating less preferred food, reducing food consumption portion, children eating first, purchasing food on credit or borrowing food, leasing of assets, relying on help from relatives and friends and skipping meals. The study recommend that government should put forward policies in agriculture and employment aimed at reducing or eliminating poverty, which will subsequently increase the level of food secure households in Niger, Nigeria.

Keywords: Per Capita, Coping Strategy, Poverty, Food Shortage, Kcals

JEL Classification: H31

1. Introduction

The state of food insecurity in the world indicated that over 688 million individuals were in dire need of food by end of 2016 from 150 countries identified with severe food insecurity issues (Food and Organization [FAO], 2017). An estimated 48% of these individuals were located in the African continent. Sub Saharan Africa (SSA) accounted for the highest percentage of people with food insecurity problem with 92%, while Northern Africa accounted for only 8% of the share of hungry people in the region. Asian continent accounted for second largest continent with people suffering from serious food insecurity with about 45%, while less than 1% each were accounted by North America and Europe of

the world population suffering from chronic malnutrition as indicated in appendix 4 (FAO, 2017).

Food insecurity according to FAO (2015), is a situation in which people lack nutritious food intake necessary for vitality and supplements for full-scale starvation. Food insecurity can be chronic or transitory, which is highly dependent on the duration of the hunger or the span. Chronic food insecurity, sometimes referred to as perpetual hunger, resulted in starvation vulnerability (Ingawa, 2002; Godfray et al., 2010). Chronic hunger has a direct relationship with the level of poverty among the society, especially among rural communities located in developing countries of the World that were seriously affected by conflicts and food insecurity challenges (Blattman & Miguel, 2010).

Some identified causes of food insecurity include unpredictable rise in global food price, shift in global food harvests to biofuel among the major food exporting countries, persistent government neglect of the area of agriculture particularly in infrastructural facilities and lack of investment in most of the developing countries, continuous conflict in some part of the world and the approaching danger of climate changes and its antagonistic impact on food production (FAO, 2012). This issue has long been observed and hence the introduction of the Millennium Development Goals (MDGs) with the ultimate aim of halving or reducing the number of under-nutrition individuals in the world by the end of 2015 (FAO, 2012).

As of now only 63 nations have met the MDGs target by the end of 2015. Regions such as Latin America and the Caribbean gained hugely in meeting the target, however only humble advance in Sub-Saharan Africa and Western Asia was achieved mostly due to calamities and conflicts, which keep on trapping people into hunger (FAO, IFAD & WFP, 2014)

Nigeria has an estimated 25.5% of its total population (170 million) classified as having serious food insecurity according to FAO (2016); World Bank (2015). Abubakar (1997) observed that one of the typical indicators of food insecurity in Nigeria was poverty. According to Brock (2013) over 62% of the Nigerian population was trapped in extreme poverty and 80% were located in rural areas. Agriculture serves as a main source of employment among the rural households, which is characterized by low productivity due to traditional mode of farming and low government interventions in the area of agriculture (Omanukwue, 2005).

With an estimated 180 million population in the country, nearly accounting for 47% of West African population, food insecurity issues will continue to be a predicament in the country. With population increase, the demand for food in the society also increases, but then the ability to produce food of nutritious quality also diminishes due to weight from the growing population in form of climate changes and other vices (FAO, 2015).

Currently the level of poverty in Niger, Nigeria has taken a different level, especially with current recession that the country found itself. More and more households are finding it difficult to feed their households. Inflation and high level of unemployment is also impacting negatively on the food security status of households. Children and women are at the receiving end. This high level of food insecurity status necessitated this study. Therefore, the objective of this study was to determine the status of food insecurity among

rural households in Niger State, Nigeria and to identify the coping strategies adopted by rural households classified as food insecure.

Previous studies on food insecurity in Niger State, Nigeria were focused only on determining the effect of food insecurity, without determining the status of food insecurity among households. Therefore this study further determined the level of food insecurity among the rural households, since poverty was always considered to be high in such locations. The study also disaggregated the level of food insecurity among the regions of the state. In most cases, once a household is faced with food insecurity, then a coping strategy needs to be employed to manage the situation. Therefore the study also adopted the reduced CSI index to identify the strategies employed by households that were classified food insecure in the study area.

2. Literature Review

Theoretically, one of the best theories that explain food insecurity situation faced by households is Malthus theory of population (1776-1834). The theory highlighted the possible perils associated with overpopulation in a society. According to him, unless measures were put in place human population will soon exceed food production, thereby resulting in starvation and hunger. The theory has its assumptions based on irrational behaviour of human being in the process of reproduction (Weeks).

Empirically, there are various studies carried out on food security/insecurity and coping strategies adaptation in Nigeria. Most recent ones include the work of Olayiwola, Tashikalma and Giroh (2017); Obayelu, Vaughan & Afolabi (2016); Agada and Igboke (2014). Others include Idrisa, Gwary and Shehu (2008); Olayemi (2012). The most prominent tools used in measuring food insecurity of household include; Household income and expenditure (HIES), Dietary diversity score, Food insecurity index (FSI) and Coping strategy index (CSI).

Olayiwola *et al.* (2017) investigated food security and coping strategies among households in Oluyole, Oyo, Nigeria. The study used the descriptive analysis, CSI and food security index (FSI). Its result revealed that 42.3% of the household were food insecure and the most frequently coping strategies adopted by the household included selling of livestock, reducing money and purchasing on credit and sometimes skipping meals. Also, Quaye (2008) studied food security and coping strategies in Ghana and related problems. The study employed the CSI and dietary diversity score. Frequent coping strategies adopted by households included migration, depending on assistance from family and friends, selling of assets and livestock to feed, consumption reduction, eating less preferred meals and eating less meals. Similarly, Ehebhamen *et al.* (2017) investigated food security and coping strategies adaptation in Edo, Nigeria and the study use the CSI and FSI. Result indicated that 52.3% of the households were food insecure and that coping strategies adopted included eating less preferred food, reducing meals, purchasing and borrowing food on credit, depending on family and friends.

However, Agada and Igboke (2014) investigated food security and coping strategies among three ethnic groups in North central region of Nigeria and employed the FSI and CSI. Results of the study revealed that household considered food insecure relied on limiting

food portion and eating less preferred food to cope with food insecure situation. Shariff and Linkhor (2008) studied food insecurity and coping strategies in poor rural households in Malaysia. The study used the descriptive analysis and CSI. The results indicated that coping strategies adopted by food secure households included selling assets, while food insecure households employed the use of borrowing money to purchase food and reducing expenditure on children in the household. Finally, Ivanda, Igboke and Olatunji (2015) researched on food security situation among Tiv farming households of Benue, Nigeria. They used the FSI and CSI. The results showed that 57.1% of the household were food secure, while coping strategies used by the households including mixed cropping, early harvesting and using high yield agricultural inputs.

The above literature shows that there is no information concerning food security situation in Niger State, Nigeria and the current coping strategies used among rural households in the State. Thus, there is need to carry out the study in order to bridge the existing gap in knowledge.

3. Methodology

3.1 Data and Sample

The study used primary data, and well structured questionnaire to gather information among 104 household heads as sample. A stratified sampling technique was adopted and three local government areas were drawn from the three agricultural zones, one each from each zone, depending on population of households in each local government area, a household sample was drawn to make a total of 104 households. The reason for this method is to identify the extent of food insecurity among the three agricultural zones. Descriptive statistics, food insecurity index and coping strategy index were used to determine household food insecurity level as well as the coping strategies adopted by rural households in Niger State, Nigeria.

3.2 Food Insecurity Index

Given the model of multidimensional poverty index developed by Foster-Greer Thorbecke, Christiansen and Boisvert (2000) which revealed an indicator that incorporate three chronic dimension cumulatively, which also considered vulnerability and uncertainty of being food secure. The index identified the different dimensions of n of food secure, with a threshold y_j identifying where a household i th is deprive from achieving certain dimension j , inline with X_{ij} (value of dimension j for household i th) which is less than the threshold or equal to the threshold.

$$Fis_i = \sum a_j P_j \left(\frac{X_{ij}}{y_j} \right) \dots\dots\dots 1$$

Where a_j indicates the vital importance attached to future, in such way vulnerability can be discounted to current situation of shortage in food, while present time of food insecurity and vulnerability in term of food might have the same impacts.

At aggregative level, the index is given as follows:

$$Fis_i = \frac{1}{n} \sum a_j P_j \left(\frac{X_{ij}}{y_j} \right) \dots\dots\dots 2$$

Where X_{ij} measure the daily per capita food intake converted into calorie per household, y_i measures the per capita food intake requirement as recommended by FAO (2,470 kcal).

Household consumption is converted into grams and each food item calorie is multiplied with the grams to obtain kcals in line with common food item consumed in Nigeria provided by Oguntona and Akinyele (1995) in appendix 3 and adopted by various scholars like Babatunde et al. (2007). Household's composition (infants, under 18 years and adults) was average using Kuwornu et al. (2013) in appendix 1 and Stefan and Pramila table of adult equivalent conversion table in appendix 2. The index is further simplifies as below:

$$\Pi = \frac{\beta_i}{\xi} \dots\dots\dots 3$$

Where Π is the food security index ranging between one and zero. A food secure household will achieve (1) and above value, while a food insecure household will fall below (1), β_i represents per capita daily food intake consume in household i th, while ξ is the per capita daily food intake requirement for the household.

3.3 Household Coping Strategy Index

One of the quickest and easiest ways to determine food insecurity situation in a location is through coping strategy index (Food and Nutrition technical Assistance [FANTA], 2003). Coping strategy index (CSI) measures household inability to meet up or access enough food for dietary requirement. Under normal circumstance a household hardly wait for food to get exhausted before adopting measures or adjusting consumption, especially when the problem is imminent (Christiaensen & Boisvert, 2000). According to Maxwell and Caldwell (2008) CSI is defined as dietary intake behavior pattern adjustment adopted by household faced with serious food insecurity situation by counting the frequency of occurring of the behavior with its severity. According to FANTA (2006) CSI measures the number of frequency and severity of behavior employed by households during food shortage.

Coping strategy is classified into two main types, modest food adjustment and sometime reversible over time, which include eating less preferred food and reducing the amount of food portion and a more severe behavior and difficult to reverse overtime including sales of productive assets (Watts, 1993). Corbett (1988); Devereux (1993) observed that the more food insecurity deteriorated, the likelihood of using coping strategies that are considered extremely severe and less reversible, which subsequently result in permanent food insecure position.

The index adopts direct questions developed to measure household frequent eating pattern, thereby relating it to the coping behavior answers to determine food security scale in the household or location. The CSI has three main basic points namely answer to the common question should be based on the correct list of coping behavior in a particular location, frequency of adaptation and identified as the severity of each coping behavior (Fanta, 2006).

4. Results

4.1 Household Heads Socio-economic Profile

Socio-economics profiling of the household heads is presented in Table 4.1 below. Results from Table 4.1 indicate that the average household head is 47 years, while classification of age brackets indicates that 43% of the household head age is 41 years – 50 years which

represents the highest age classification, about 14% are within the age brackets of 31 years – 40 years, 13% are within 21 years – 30 years of age, while only 3% are within 18 years – 20 years of age. In term of gender, Table 4.1 shows that 97% are male-headed household's heads and only 3% are female-headed household heads. Marital status also from Table 4.1 shows that 97% are married; about 2% are widowed, while only 1% are divorced. Average household size from Table 4.1 shows that, there is a minimum of 13 individuals from each household. In term of classification, Table 4.1 shows that 46% of the household head have a family size of 11 – 20 individuals; about 41% have family size of 1 – 10 individuals, while 15% have a family size of 21 – above.

In terms of farming activities of the study area, Table 4.1 shows that there is an average of 19 years farming experience among the rural household, an estimated 24% are within 1 - 10 farming experience, 63% are within 11 – 20 years farming experience while 13% have 21 – Above years farming experience. Household average farm size is estimated at 2 ha, farmsize classification from Table 4.1 shows that 88% have 1 – 5 ha of farm size, while 12% have 6 – 10 ha of farm size.

On land ownership structure, Table 4.1 indicates that 94% acquired their land through family by way of inheritance, 3% acquired their land through outright purchase while 3% also acquired their land by means of renting. An estimated 75% of the rural household farmers indicated that they have not established any contact with extension service agents, about 19% establish a contact of one in a month, while 6% had established contact of two times a month with extension service agents.

In terms of economic profiling of household heads, Table 4.1 shows that the average income among household heads is ₦43, 000. In terms of income classification, about 81% of the rural household heads were within N10, 000 – N100, 000, this represents majority of the rural household heads in the study area. This suggests that majority of the household heads were faced with high level of poverty since per capita income was less ₦2, 000 daily. About 13% were within the income classification of ₦101, 000 – ₦200, 000, while only 6% are within the income classification of ₦201, 000 – Above. From Table 4.1 household monthly expenditure on food items shows that, averagely each household has N55, 500 spent on food items. Classification further revealed that 91% representing majority of the households were with ₦10, 000 – ₦100, 000 monthly expenditure classification, about 5% were within ₦101, 000 – ₦200, 000 while 4% were within ₦201, 000 – Above.

Table. 4.1 Socio-economic Characteristics of Household Heads

Variables	Frequency	Percentage	Means
<i>Household Age</i>			47
18 - 20 Years	3	3	
21 - 30 Years	13	13	
31 - 40 Years	15	14	
41 - 50 Years	45	43	
51 - Above Years	28	27	

<i>Household Head Gender</i>			
Female	3	3	
Male	101	97	
<i>Household Marital Status</i>			
Single	0	0	
Married	101	97	
Widowed	2	2	
Divorced	1	1	
<i>Level of Education</i>			
Adult Education	32	31	
Primary	54	52	
Secondary	15	14	
Tertiary	3	3	
<i>Farming Experience</i>			
1 - 10 Years	25	24	19
11 - 20 Years	65	63	
21 – Above	14	13	
<i>Household Size</i>			
1 - 10 Individuals	41	39	13
11 -20 Individuals	48	46	
21 – Above	15	14	
<i>Farm Size</i>			
1 - 5 ha	92	88	
6 - 10 ha	12	12	
11 – Above	0	0	
<i>Land Ownership</i>			
Inheritance	98	94	
Purchased	3	3	
Rent	3	3	

Variables	Frequency	Percentage	Means
<i>Extension Visitation</i>			
None	78	75	
One a month	20	19	
Twice a month	6	6	
<i>Credit Source</i>			
Yes	11	11	
No	93	89	
<i>Household Head Income</i>			
₦10, 000 - ₦100, 000	84	81	₦43, 000
₦101, 000 - ₦200, 000	14	13	
₦201, 000 – Above	6	6	

Variables	Frequency	Percentage	Means
<i>Household Head Expenditure</i>			₦55, 500
₦10, 000 - ₦100, 000	95	91	
₦101, 000 - ₦200, 000	5	5	
₦201, 000 – Above	4	4	

Source: Field Survey, 2017

4.2 Household Food Insecurity Status

Table 4.2 indicates the percentage of households as classified food secure in Niger State, Nigeria using the food insecurity index. The result from Table 4.2 indicates that 40%, 67% and 49% of the rural households in Niger, Nigeria were food secure with index of 1.08, 1.20 and 1.22 for Lapai, Kontagora and Suleja respectively. Clearly, Suleja had the highest index of 1.22 suggesting that food secure households had the highest index when compared to Kontagora and Lapai with 1.20 and 1.08 respectively. However, Kontagora had the highest number of adult equivalent classified as food secure than either Suleja or Lapai. Overall, the index among the households in the State is estimated at 1.18 with a per capita daily calorie consumption of 2,920.15 kcals as against the per capita daily calorie requirement of 2,473.54 kcal

Total household surplus among households in the State is 0.18 (18%), indicating the extent to which these households classified as food secure exceeded the threshold of 1. Overall, adults equivalent among food secure households is estimated at 167 individuals among the 104 households considering average energy per day requirement of infant with factor equivalent of (0.3) and children of 6 -18 years with factor equivalent of (0.7) given in appendix (1) and appendix (2).

Table 4.2 Summary of Food Secure Households in Niger, Nigeria

Factor	LAPAI (n = 26)	KONTAGORA (n = 35)	SULEJA (n = 43)	POOLED (n = 104)
%	40	67	49	52
Daily consumption	96110	199436	192119	487665.00
Daily Calorie Requirement	89244	165758	158080	413082.00
Per capita Daily Consumption	2670	2977	3002	2920.15
Per capita Daily requirement	2479	2474	2470	2473.54
Food Security Index	1.08	1.20	1.22	1.18
Head Count	0.40	0.67	0.49	0.52
Shortfall (Pi)	0.00	0.00	0.00	0.00
Surplus (Ps)	0.08	0.20	0.25	0.18
Adults equivalent	36	67	64	167.00

Source: Field Survey, 2017

Table 4.3 shows the percentage of households classified as food insecure, an estimated 60%, 33% and 51% of the households in Lapai, Kontagora and Suleja respectively, with overall average of 48% of the total adult equivalent in the study area classified as food insecure.

Further indication from Table 4.3 shows that Suleja and Lapai had the highest food insecure adult equivalent of 66 and 54 respectively, however, Lapai had the highest percentage of household classified as food insecure. Food index further reveals that Lapai, Kontagora and Suleja achieved a status of 0.65, 0.64 and 0.56 respectively, indicating that all the households were below the threshold of 1. Food shortage from Lapai, Kontagora and Suleja shows 0.35 (35%), 0.36 (36%) and 0.44 (44%) respectively.

Table 4.3 Summary of Food Insecure Households in Niger, Nigeria

Factor	LAPAI (n = 26)	KONTAGORA (n = 35)	SULEJA (n = 43)	POOLED (n = 104)
%	60	33	51	48
Daily consumption	86132	52520	91476	230128.00
Daily Calorie Requirement	133434	81741	163482	378657.00
Per capita Daily Consumption	1595	1592	1386	1504.10
Per capita Daily requirement	2471	2477	2477	2474.88
Food Security Index	0.65	0.64	0.56	0.61
Head Count	0.60	0.33	0.51	0.48
Shortfall (Pi)	0.35	0.36	0.44	0.39
Surplus (Ps)	0.00	0.00	0.00	0.00
Adults equivalent	54	33	66	153.00

Source: Field Survey, 2017

On the average about 48% of the total households in the study area are food insecure with daily calorie consumption of 230,120 kcals, daily calorie requirement 378, 657, per capita daily consumption 1,504.10 kcal, per capita daily calorie requirement of 2,474.88 kcals. Average index from Table 4.3 reveals that household classified as food insecure achieve a food security status of 0.61 clearly indicating a shortage of 0.39 (39%). Total adult equivalent of household classified food insecure is 153 across the three location surveyed.

Table 4.4 shows the summary of the index of food insecurity among rural households in Niger, Nigeria. The table indicates that total overall daily calorie consumption in the study area is 717,793 kcals, total overall daily calorie requirement is 791,739 kcals, while per capita daily calorie consumption in the study area is 2,243 kcals, per capital daily calorie requirement is 2,474 kcal which is far above the daily per capita calorie consumption. This resulted in an index of 0.91, which suggests that overall Niger, State still faces a serious food security challenges among the household. In all the three locations only Kontagora is food secure because the have meet and surpass the threshold of 1 with an index of 1.02 thereby having a surplus of 0.02. Lapai has the lowest index of 0.82 among the State, suggesting that food insecurity is the highest in the State.

In terms of food shortage, the State has a food deficit of 0.07 (7%) which represents a good signal that, with hard work, government intervention and reduction in the number of population among households, food security can easily be achieved in the near future.

Overall, the State has an adult equivalent of 320 adults from the total households of 104, Suleja had the highest adult equivalent of 130 adults, and this was slightly followed by Kontagora, while Lapai had the least adult equivalent of 90.

Table 4.4 Summary of Food insecurity Households in Niger, Nigeria

Factor	LAPAI (n = 26)	KONTAGORA (n = 35)	SULEJA (n = 43)	POOLED (n = 104)
%				
Daily consumption	182242	251956	283595	717793
Daily Calorie Requirement	222678	247499	321562	791739
Per capita Daily Consumption	2025	2520	2182	2243
Per capita Daily requirement	2474	2475	2474	2474
Food Security Index	0.82	1.02	0.88	0.91
Head Count	1.00	1.00	1.00	1.00
Shortfall (Pi)	0.22	0.00	0.12	0.07
Surplus (Ps)	0.00	0.02	0.00	0.00
Adults equivalent	90	100	130	320

Source: Field Survey, 2017

Various studies adopted the food insecurity index including the works of Ganiyu and Omotayo (2016); Ogundari (2017); Asogwa and Umeh (2012) in different locations of Nigeria.

4.3 Coping Strategy Index (CSI)

Once a household is classified as food insecure, then coping strategy sets in. The strategies are usually employed to mitigate the food shortage. Table 4.5 shows that the study area had seven different coping strategies. Some were extremely severe and irreversible, while others were less severe and reversible. Selling assets, skipping meals and children eating first before adults all represent severe and irreversible coping strategies, while borrowing food or purchasing food on credit, reducing consumption pattern, relying on help from families and friends and eating less preferred meals all represent less severe and reversible coping strategies.

Table 4.5 shows that the most frequent coping strategies adopted by households in Niger, Nigeria were eating less preferred meals 90%. It was followed by children eating first before meals 81%, borrowing or purchasing food on credit 80%, reducing food consumption 77%, Selling assets 65%, relying on families and friends for food 48%, skipping meals 43%. Clearly the study area has a mixture of severe and less severe coping strategies adopted when households is faced with food shortage.

Table 4.5 Frequent Coping Strategies Adaptation Among Households in Niger, Nigeria

Strategies	Never		Occasional		Always		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Borrowing	21	20.19	70	67.31	13	12.50	104	100
Selling asset	36	34.62	44	42.31	24	23.08	104	100
Skipping meals	59	56.73	27	25.96	18	17.31	104	100
Reduction in consumption	24	23.08	67	64.42	13	12.50	104	100
Reliance on help	54	51.92	36	34.62	14	13.46	104	100
Children first	20	19.23	22	21.15	62	59.62	104	100
Eating less preferred food	10	9.62	50	48.08	44	42.31	104	100

Source: Field Survey, 2017

While majority of households adopted eating less preferred foods in the study area, at the same time more people also adopted extremely severe coping strategies like children eating first before adult and the more households adopt such behavior, the higher the tendency of the households being food insecure perpetually. Furthermore, Table 4.5 indicates that moderate coping strategies accounted for 43%, while severe coping strategies accounted for 26% of coping behaviors.

5. Conclusions and Recommendations

This paper determined the food insecurity index and frequent coping strategies of rural households in Niger, Nigeria. Food insecurity index reveals that 52% of the rural households in Niger, Nigeria were food secure in that, the households had achieved the threshold for food secure households of 1 and above, while 48% fell short of the threshold and as such classified as food insecure. The moment households get slightest idea of food shortage, immediately they start to take action to counter the problem. Frequent identified coping strategies in the area included eating less preferred meals, children eating first before adults in the households, borrowing food or purchasing on credit, reducing consumption pattern, selling assets, while less frequent coping strategies included relying on help from friends and relatives to eat as well as skipping meals.

On the other hand, the descriptive analysis further revealed that the average age among households in the study area was 47 years; about 97% of the household heads were male and married. The average households size was 13. An estimated 52% of the household heads had primary education certificate. Average farming experience among rural farmer is 19 years, while farm size average was 3 ha with 88% of the household having a farm size of 1 – 5 ha. In term of landownership, 94% owned their farmland through family inheritance and 75% of the household heads had not established contact with extension service agents. Average monthly household heads income was ₦43, 000 while average monthly expenditure among rural household heads was ₦55, 500.

Results from the food insecurity index and CSI represent a fair reflection of household activities in the study area. Therefore, the food insecurity index and CSI finding could be used as yardstick for determining food insecurity index and CSI in other part of the States in Nigeria especially the North central regions that share similarities with Niger, Nigeria.

The research, therefore, strongly recommend that government policies that can alleviate or eliminate poverty among rural households should be encouraged, especially in agriculture since majority of the household heads source of employment is agriculture; for instance, provision of subsidy in agricultural inputs and credit facilities to farmers at a very low interest rate to farmers. Also, household heads are strongly recommended to adopt less severe coping strategies that can easily be reversed, when faced with food insecurity situation.

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APPENDICES

Appendix 1: Recommended Daily Energy intake and Equivalent Scale

Age category (yrs)	Average energy per day	Factor equivalent
Children less than 6 yrs	741	0.3
Children (6 – 18) yrs	1,729	0.7
Adults (> 18) yrs	2,470	1.0

Source: Kuwornu et al., (2013).

Appendix 2: Adults equivalent for adjusting household size

Age category in (years)	Male	Female
0-1	0.33	0.33
1-2	0.46	0.46
2-3	0.54	0.54
3-5	0.62	0.62
5-7	0.74	0.70
7-10	0.84	0.72
10-12	0.88	0.78
12-14	0.96	0.84
14-16	1.06	0.86
16-18	1-14	0.86
18-30	1.04	0.80
30-60	1.00	0.82
>60	0.84	0.74

Source: Stefan and Pramila (1998).

Appendix 3: common food items eaten

Food items	Kcal/kg	Food items	Kcal/Kg
<i>Staple food</i>		<i>Fruits</i>	
Cassava Flour	3870	Plantain	770
Gari	3840	Banana	960
Soy flour	2600	Pineapple	320
Wheat Grain	3400	Apple	570
Cowpea (Beans)	5920	Coconut	580
Sweet Potato Tuber	1000	Guava	730
Maize Grain	4120	Sugarcane	360
Maize Flour	3500	Mongo	590
Sorghum Grain	3500	Pawpaw	300
Millet Grain	3500	<i>Meats & Animal prod</i>	
Groundnuts	5950	Cow Meat	2370
<i>Vegetables</i>		Chicken	2380
Okro	4500	Fish	2230
Tomato	880	Eggs (pieces)	1400
Pepper	3930	<i>Drinks</i>	
Onion	440	Soft drink	620
Egg plants	440	Orange Juice	400
Cucumber	270	Apple Juice	550
Pumpkin	440	Pineapple	560
<i>Beverages</i>		<i>Dairy Products</i>	
Cocoa	1200	Milk	4900
Tea	1200	Cheese	4000
Coffee	4100	Yoghurt	4100

Source: Oguntona and Akinyele (1985)

Appendix 4: Number of People Affected by Severe Food Insecurity in the World

Number of People Affected by Severe Food Security Challenges - 2014 to 2016

	Number in millions		
	2014	2015	2016
WORLD	665.9	645.1	688.5
AFRICA	289.5	298	333.2
<i>Sub-Saharan African</i>	<i>265</i>	<i>275.7</i>	<i>306.7</i>
ASIA	337	306.7	309.7
LATIN AMERICA/CARIBBEAN	27.7	28.1	38.3
N. AMERICA & EUROPE	15.6	17.1	13

Source: FAO (2017)

The Impact of Trade Liberalization Policy on Nigerian Textile Industries: Evidence from Comparative and Descriptive Method of Analysis

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Abstract

Textile industry in Nigeria has been a leading industry that captures the development needs of the country's early import substitution industrialisation strategy. It acts as a producer of essential mass consumer goods with ability to draw on an existing raw material base and massive employment of labour force. Structural adjustment policies such as liberalization, devaluation and deregulation have led to the demise of the industry. It is in line with this, that, this study was designed to find out the impacts of trade liberalization policy on the performance of textile industries in Nigeria. The study sought for information from secondary data, which includes reports from organized and private institutions such as MAN, NTMA, and international organisations like UNIDO, IMF/World Bank reports, etc. Both comparative and descriptive methods of analysis were employed to analyse the data collected. The study was designed to cover pre-SAP and SAP period for effective comparison. It was found that trade liberalization has negative impact on performance of the Nigerian textile industry in the areas of production: falling drastically, low sales, low capacity utilization and decline in employment. The study recommends for serious government intervention to encourage the public to patronize locally made Nigerian textile products, to limit import by quotas on textile production and to construct a petro chemical industry to ease the importation of textile inputs, e.g. chemicals and dyestuff.

Keywords: MAN, NTMA, UNIDO, IMF, World Bank, Comparative and Descriptive

JEL Classification: F14, Q56

1. Introduction

Textile industry has been Nigeria's leading industry with some large number of factories and some major workers, leaving out the unaccounted number engaged in small weaving establishments, including those in the informal sector. In line with long established theories, it acts as a producer of essential mass consumer goods and has become the backbone of early industrialization. Its ability to draw on existing raw material base made the textile industry even attractive. However, this makes it the leading sector as well as a prime candidate for early import, substitution, and industrialization for many developing countries.

The import substitution development of the textile industry has been enforced by government through the imposition of tariffs and quotas on imports of textile. FGN(1986)

In fact, the textile industry was the corner stone of industrialization in the independent Nigeria. It was established with a lot of hopes and fanfare. The post-independence boom in the industry brought rapid expansion. More Mills sprang up in the industrial centres of Kano, Ibadan, Owerri and Funtua with corresponding cotton mills where cotton was grown. Since independence, there is nothing that captures the travails of the Nigerian economy more than the textile mills.

But today, the Nigerian textile industry is comatose. The demise of the industry started with the Structural Adjustment Programme (SAP) that led to massive devaluation and deregulation of the exchange rate and interest rate respectively. However, also in line with the SAP, the liberalization of foreign trade which allows the importation of the previously banned items of textile products also contributed.

2. Literature Review

In much of the orthodox literature on economic development, strategies of industrialization are discussed in the content of trade and commercial policies in the literature to distinguish between policies that have direct bearing on establishment and expansion of industrial capacity and policies that work through the channel of international trade. Admittedly, it is true that various trade and commercial policies have profound implication for the rate, structure and characteristics of industrialization. It is, nevertheless, essentially misleading to regard industrialization merely as a consequence or off shoot of a particular trade strategy.(Kirkpatri and Nixon,1983:9-45). This is because most third world countries regard industrialization of the economy as fundamental objectives of development and deliberately tailor their trade and commercial policies to achieve it.

There is indeed something new but in policy making rather than in development of theory. The 1980s have seen the beginning of a change of heart among developing country policy makers with regard to trade policy. The import substitution consensus of the previous decades with its preference for high levels of tariffs and non-preference for high levels of tariffs and non-preference for barriers has all but evaporated. Some of the staunchest import substitutes such as Mexico and Turkey have now made a decisive push towards trade liberalization (Rudiger D 1992). In this, the simplification of import procedures reduction or elimination of quotas and rationalization of the tariff structure are the most common reforms. But the disappointment in import substitution and the interest in trade reform appear genuine, even among the more equivocating countries.

It is paradoxical that the 1980's should have become the decade of trade liberalization in developing countries. The 1980's have also been a decade of intense macroeconomics instability. Common sense would suggest that the conventional benefits of liberalization have become muted. If not completely offset, under conditions of macro instability characterized by high and variable inflation on one hand and fiscal and balance of payment crises on the other. Trade reforms are expected to work by reducing the distributions in the structure of relative prices and by directing sources to sectors that can make the best use of them; macroeconomic instability interferences with both. High and variable inflation serves

to confound price signals by making it difficult to disentangle relative price changes from movement in the price level (Alexander,1979). The showdown in domestic activity renders structural change more painful by exacerbating transitional unemployment.

The second reason has to do with the role of foreign creditors and of the IMF and World Bank in particular. The 1980's was a decade of great leverage for these institutions vis-a-vis debtor countries or government, especially where poorer African countries were concerned. The trade policy recommendations of the World Bank were adopted by cash starved government frequently with little conviction of the ultimate benefits (Bhagwati & Krueger, 1978). This accounts for the high incidence of wobbling and reversal on the trade front once again especially in Africa. It also indicates that we ought not to be too optimistic on the sustainability of reforms in many of these countries (Dani Rodrik, 1992).

In Korea, trade reform occurred steadily in the 1970's. Here, the trade liberalization was selective. Major sectors of the economy were included, but the selection was accomplished in a manner that apparently did not interface with productivity and growth, Korea made a point, in particular, of allowing capital goods and intermediate goods to be imported (Ndulu *et al*, 1994). For example, automobile engines were first imported and then produced under licenses and then under Korean design. By 1983, of some 10,000 product classes 19.6 percent still contained restrictions. By 1989, the fraction had declined to only 5.3 percent and most of these were primary commodities. Only 46 industrial products continued with import licensing or prohibition (.Rudiger,1992) This average tariff has been brought down from 24 percent to 11 percent for industrial products with the prospects under a new tariff law to lower them to 5 percent by 1993 (Young, 1989 & Rudiger, 1992)

Even though Korea liberalized only selectively, liberalization did take place. Korea's non-oil import/*GDP* ratio back in 1960 was less than 10 percent, but since 1975, the figure has been in excess of 25 percent with the help of a selectively liberal import strategy. Korea has been able to develop a highly competitive manufacturing sector that offers its own brand name manufactures of increasing sophistication, ranging from cars to TV and now high technology goods. Even though trade had been substantially liberalized in the 1980's of the 12 percent import ratio for finished manufacturing, 13 percent was in consumer goods. Thus liberalization was conspicuously concentrated on capital goods. (Bhagwati and Krueger, 1978)

A third example of liberalization is Mexico, starting in 1985. The economy was opened, the scheme first envisaged was gradual opening, but as political pressure for delays and exemption built up the Mexican administration reacted by pushing the timetable and opening radically.(Rudiger, 1992). Although some areas like chemicals and automobiles have been substantially exempted so far, a great deal of liberalization has been accomplished, import penetration increased already from an average of 11.3 percent in 1980 – 85 to 14.5 in 1986 – 90. This sharp growth in imports unaccomplished by an offsetting immediate gain in exports gave rise to the free trade initiative with the United States which the became the issues under discussion.

With regards to Nigeria, however, liberalization of the economy was more outward in 1986, with the introduction of the *IMF*/World Bank Structural Adjustment Programme. The SAP

for Nigeria like those being implemented elsewhere in the sub Saharan Africa sought to deregulate the economy and expose it to international competition. The ultimate goal of the SAP for Nigeria was to alter and re-align aggregate domestic expenditure and production pattern so as to minimize dependence on imports and enhance non-oil exports thereby bringing the economy back on the track of steady and balanced growth (*FRN*, 1986). Therefore, the centrality of trade and exchange rate liberalization to the declared goals of SAP for Nigeria is very clear. With the introduction of the SAP in 1986, the first concrete evidence of the trade liberalization attempts in Nigeria could be found. The first attempt of the SAP activities was the systematic deregulation of the exchange rate followed by implementation of the following policies by the beginning of 1987:

- (a) Abolishing of import and export licensing system.
- (b) Dissolution of marketing boards.
- (c) Introduction of the second tier foreign exchange market.
- (d) Elimination of export tariffs.
- (e) General reduction of import tariffs such that the nominal averaged (outweighed) protection rate fell from 34 percent in 1986 to 21 percent in 1987.
- (f) Duty drawback scheme was introduced and a generous retention scheme (100 percent of foreign exchange earning was allowed) (Okeke, 1990; Okeke, 1991).

The theoretical framework within which trade liberalization emanates has been the classical economics trade theories of the mutual benefit of international trade among different countries of the world in the work of Adam Smith “The Wealth of Nations” since 1776. The idea of trade liberalization originated from the classical economist argument of the free trade versus protection. The free trade argument was first developed by Adam Smith’s argument of the role of the state in economic activities of a nation. He therefore saw non-government interference in economic activities of the state but strict appearance of Laissez-faire activity. To this however, he emphasized the working of an “Invisible Hand” as the regulatory mechanism that serves and promotes both interest of an individual and the society in general. From here, Smith went further to develop his famous theory of trade known as the Absolute Advantage which was seen to be the determinant of trade. To Smith, the objective of trade was to maximize national real income (“render the annual revenues of society as great as it can be”). By appealing to the principle of absolute advantage, Smith maintained that no country should make at home what would cost more to make than to import. If a foreign country can supply us with a commodity cheaper than we ourselves can make it, we better buy it from them with some part of the produce of our own industry, employed in a way in which we have some advantage. Samuelson(1973)

Moreover, the exposition of comparative advantage by David Ricardo in 1817 adds to the Adam Smith’s argument. In this, Ricardo states that, “there is nothing particularly favourable about export being greater than import”, and that what really matters was the principle that a country should specialize in the production of those commodities for which production costs are comparatively low and import those commodities for which production costs are comparatively high.

3. Methodology

The method of data collection was largely based on secondary data. In particular, the study relied on the reports from organized and private institutions such as Manufacturers Association of Nigeria (*MAN*) and Nigeria Textile Manufacturers' Association (*NTMA*), and published data from international organizations such as *UNIDO* and *IMF/World Bank* reports. The essence of choosing secondary data as the only source of information was due to the fact that the information required was more easily ascertained as compared to using primary data. The study also used findings of other researchers and relevant publications of other scholars.

The method of analysis of the data collected was both comparative and descriptive. Comparison was made between the pre SAP period when textile industries flourished and the SAP period up to 1990's. Tables were employed to ease up the descriptive analysis.

4. Results

In terms of value added, the textile industry in Nigeria showed an upward trend rising to 19% from 12% in 1965. This is as revealed by table one.

Table 4.1: Percentage of Value Added by Industrial Group

Industrial Group	1965	1968
Food manufacturing	27.0	14.0
Drinks and Beverages	16.0	16.9
Tobacco	15.0	14.0
Footwear	1.3	
Leather Tanning and Leather Production	1.0	
Textiles and Textile Products		

Source: Olayide (1975:60), extracted from Badayi (1999)

In terms of employment, the industry contributed 17.1% of total manufacturing employment in 1965, 29.3% in 1972 as revealed by table 2.

Manufacturing Empowerment

At the end of 2015, estimated manufacturing employment was about 1.6 million jobs across the sectoral groups and industrial zones. An employment survey conducted across sectoral groups in the period under review showed that employment performance in the sector was a mixed bag; while some firms increased employment others exigently downsized in the period.

Consequently, new addition to manufacturing job from January to June 2016 was estimated at 17,688 against 7,910 jobs created in the corresponding period of 2015, thereby indicating a 9,771 or 223.4 percent increase over the period. It increased by 8,295 jobs when compared with 9,393 jobs created in the sector in the preceding half. However, in the same period, a total number of 12,400 jobs were lost in the sector due to the economic exigencies in the period. By implication therefore, the net employment in the first half of 2016 was 5,288 jobs.

The employment data generated from the survey of manufactures was also analysed to reveal the performance of the various sectoral groups. From the analysis, domestic/ industrial plastic and rubber group created 7,327 jobs in the period under review as against

1,089 jobs created in the corresponding half of 2015; thereby indicating 6,238 jobs increased over the period. Employment created in the sector also increased by 6,001 jobs when compared with the 1,326 jobs created in the preceding half. Domestic Industrial, Plastic, Rubber & Foam sector account for 41 percent of the total manufacturing jobs in the period under review. Unfortunately, the group lost a total of 2,699 jobs also in the period; thus indicating a net employment of 4,628 jobs.

Table 4.2: Employment of Nigeria's Manufacturing Industry by Group

Sector	estimated	job	job	job	job added
	cumulative	added	added	added	
	total job	1 st Half	2 nd Half	1 st Half	2 nd Half
	2015	2015	2015	2016	2016
Food, Beverage & Tobacco	54,384	2,205	3,390	2,378	1,255
textile, apparel & footwear	55,380	1039	543	1594	4818
Wood & Wood Products	4920	363	390	216	34
Pulp, Paper, Printing & Publishing	53905	627	75	615	489
Chemical and Pharmaceutical	31324	1089	789	3468	1168
Non-Metallic Product	1184005	186	99	469	91
domestic industry plastic and rubber	31377	1161	1302	7327	2699
Electrical & Electronics	28679	348	1302	524	315
basic metal, iron and steel	132744	651	921	610	918
motor vehicles & misc. assembly	27498	255	552	487	613
Total	1,611,035	7,917	9,393	17,688	12,400.00

Source: MAN Survey, 2016

According to Federal Government of Nigeria's (FGN) report (1981), the Nigerian textile industry was one of the leading sectors with about 20% of employment and 15% of total value added in the manufacturing. The industry was said to have processed the capacity to produce 400-600 million meters of cloth. The products ranged from gray bet to shirting dyed cloths, prints of various quantity and pattern as well as embroiled lace. They also included a smaller share of the tube wells bed sheets, blankets and carpets as well as some knitted goods. Others were gold prints, dress prints, Bobbies, brocades head and African prints which account for 35-40% of total fabric production.

The trend from table three suggests that, in absolute terms, the total output of woven fabrics has increased at a somewhat fluctuating trend from 1972 – 1982 when it reached its peak, before it subsequently dropped in 1984 and 1985 a level lower than that of 1973. The decline from the year 1983 was a feature that characterized virtually all the manufacturing sectors of the country. This trend was the product of the dramatic decline in the foreign exchange earnings that has perished since the slump in the international market following the world recession of 1980-83.

The same picture emerges from a comparison of the manufacturing value added of selected industries as shown in the table.

Table 4.3: The Output of Textile Product in the Period 1972-1985

Year	Cotton and Cotton Blends (I)	Woven fabrics synthetics and Artificial Fabrics (II)	Total (I) and (II)	Knitted Fabrics (III)
1972	190.3	5.0	195.3	-
1973	291.6	9.6	301.2	-
1974	264.8	21.4	296.2	12.9
1975	333.4	38.1	371.5	16.8
1976	367.9	52.7	420.6	25.8
1977	393.9	47.0	445.9	36.0
1978	385.7	56.6	442.3	31.2
1979	297.3	40.8	328.1	21.4
1980	426.8	60.0	486.8	14.9
1981	491.3	51.6	542.9	14.9
1982	596.9	58.9	655.8	5.0
1983	337.7	63.3	401.0	12.8
1984	239.8	26.8	206.6	12.4
1985	230.0	25.0	275.0	-

Source: UNIDO Industrial development review series Nigeria (1988)

Moreover, according to NTMA (1996), the industry is the second largest employer of labour after government. When in full capacity production, the industry has a capacity of employing 250,000 workers with capable expansion and integration the job opportunity may double. The industry will of course be capable of supporting almost 2 million people at its fullest capacity utilization. Taking into account spouses and dependent of those directly attached to it.

Just like any other industry, development in the Nigerian textile industry was not without problems. The industry has also faced turbulent period in the history of its growth. As far back as 1976, there was steady decline in the ability of the domestic cotton production to meet the increasing need of textile industry (Okeke, 1990; Badayi, 1999). In 1990, crisis started hitting the industry because of distortions brought about by the oil boom of the 1970s. This led to sharp rise in external value of the Nigerian Naira, the erosion of domestic purchasing power and sectoral dislocations caused by massive spending of oil's revenue and heavy imports (Andrea & Beckham, 1985). The problem was exacerbated by a sharp increase in the minimum wage in a market situation already exposed to heavy competition from cheaper, smuggled imported substitutes.

Following a steep fall in oil earnings that began in 1981, the full impact of which was postponed by borrowing, made the domestic textile industry to shrink, with capacity utilization coming down to 30% (Badayi, 1999). Having become critically dependent on imported raw materials, industrial production fell further as the import capacity of the economy collapsed. A survey made by textile employers association showed that in 1984 one quarter of a sample of 47 factories employed below 50% of their full labour force. Only

about 1/3 employed over 75% while overall reduction in employment for the sample was about 40% (Brandell, 1991).

So, the years 1980-1986 were years of mass redundancy in the history of textile development in Nigeria. By 1986, with the introduction of SAP and its policies and strategies to which trade liberalization was a part, only 20% of the cotton requirements of the industry could be met by local cotton production (Okeke, 1990). Domestic cotton production in 1985 harvesting year was 15,000 tonnes against 100,000 tonnes national requirements (Africa textiles, 1991). The industry had lost about 40,000 workers at 40% of its installed capacity.

In conclusion, the textile industry was faced with a lot of problems of low capacity utilization and fast receding domestic raw material base with the declining foreign exchange earnings from the country's major export product crude oil, the massive import of raw materials requirement for the textile industry could not be sourced locally at least for now. These included dye stuff, viscose fibre and chemicals owing to lack of petrochemical base in the country. It was also true with regard to machinery, equipment and spares parts because of lack of domestic engineering capacity to produce them.

According to industry sources, in terms of employment, the textile industry employed nearly 500,000 (five hundred thousand) in 1983, between manufacturing ginning in addition to the thousands of tailors and farmers. But reports from Textile, Garments and Tailoring Senior Staff Association of Nigeria (*TGSSAN*), revealed that within the last 3 years (1996-1999) not less than eleven (ii) mills were distressed and if situation persist may close down. Over 100,000 workers have lost their jobs. But if those people in general supply, retailers of finished textile products, sellers of dye stuff and chemicals and associated organization were added with their dependants to this number it would be almost 1000,000 if the industry collapsed, over 150,000 Nigerians would lose their jobs. This was quite hesitating to make our workers jobless and create jobs for Indians, Indonesians and Chinese workers all in the name of free movement of goods (Trade Liberalization) on which no duty or VAT is paid.

In addition, the World Trade Organization (*WTO*) agreement signed by Nigeria had contributed further to the negative impacts of trade liberalization on the Nigerian textile industry. Even though everywhere was becoming frowzy with liberalization and globalization policy of *WTO* there is no clear rules and machinery or system is place for carrying out its policy. At best the world is being called upon to regulate itself but surprisingly, though not many knew that what the *WTO* is all about is not only world product trade simplicity, but a gamut of unhampered trade in capital, goods and services in an unordered setting which creates its own problems. It is not difficult to visualize this state of confusing because opening up the borders all nations for trade among unequal nations without rule for checks and balances and with institution to implement, monitor cannot create available working arrangement at that level. So the developing ones (*TGTSSAN*, 1999)

According to *NTMA* (Textile Manufacturer's Association of Nigeria, Kano Branch), it is estimated that almost 200,000,000 (Two Hundred Million) meter of product/cloth are being

dumped here at an approximate cost of N120,000.00 and the duty on that is supposed to be N90,000.00 which is huge amount in lost revenue.

5. Conclusion and Policy Recommendation

The conclusion that can be drawn from this study is that trade liberalization has negative impact on realignment textile industry. The policy has impacted negatively on performance of the realignment textile industry in the areas of production falling drastically, low capacity utilization, low sales and decline in employment.

To suggest the solutions to problems found to be affecting the operational conditions of Nigeria textile industry, there is the need to acquire serious government intervention in the following ways.

There is need for government to encourage and motivate the citizens to develop love for locally made Nigerian textile products so as to generate adequate demand that will be consistent with industrial production.

Government should also ensure minimum market security by employing several strategies like limiting imports by quote on specific items especially textile products; and setting a minimum standard of quality within which all goods coming into the country must meet. This standard is usually so high that most goods (except the locally made) are excluded from the market. All nation's of economic merit set minimum standard of quality.

Government is also required to construct a petro-chemical industry whose products are inputs to the industry thereby reducing the demand for foreign exchange for importation of textile chemicals, dye stuff and other auxiliaries. Also, government should resuscitate the matching tool companies with a view to encouraging local sourcing of spare parts.

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An assessment of Community Based Provided Services on Income of Fish Processors in Kogi State, Nigeria

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Abstract

Fish is highly perishable and needs to be processed immediately, it is caught but the processors lack the capital and other necessities to carry out their processing activities. This study examined the effects of community based organizations (CBO) on income of fish processors in Kogi State, Nigeria. The specific objectives of the study were to describe socio economic characteristics of fish processors; identify areas of intervention of CBOs on fish processors; determine the effect of CBO on the income of fish processors and identify constraints faced by fish processors in the study area. In order to achieve the study's objectives, multi-stage sampling technique was used to select 192 fish processors. Data were collected using questionnaires and interview schedules and were analyzed using the descriptive statistics and Ordinary Least Square (OLS). Results revealed that fish processing is a female dominated business in the study area and average household size was 4. Areas of intervention of CBOs in the study area were building of market stalls, maintenance of roads, provision of furniture and equipment to schools. The result further revealed that processing equipment and shops given by the CBOs had huge impact on the income of the respondents while training had a negative relationship with the respondent's income. Some of the limitations stood up to by the respondents were lacking capital (86.5%), inaccessibility of credit (68.8%) and surprising expense of transportation (41.7%).. Based on the findings of the study it was recommended that improved processing equipment should be given to the processors by the organizations so as to help support their individuals business which will thusly help increase their income.

Keywords: Community Based Organizations, Income, Fish Processors

JEL Classification: L23, O15

1. Introduction

Community Based Organization (CBO'S) appeared because of inability of government in meeting the financial needs of its native (Claudia, 2003). They are non-benefit and non-administrative associations since all individuals contribute monetarily towards the satisfaction of their obligations to the immediate condition and not rely upon government exclusively before satisfying these (Claudia, 2003). Wahab (2000) reported that individuals in developing nations have up to this point relied upon their legislature to meet their fundamental needs. Notwithstanding, self-improvement ventures embraced through intentional exertion and full commitment of people and corporate gatherings in networks are the essential nucleus for grassroots advancement.

Community individuals in most provincial settings meet up so as to recognize their requirements, plans, difficulties and style out approaches to address these issues with greatest reliance on their drive and assets with or without the help of government or non-legislative associations. Community Based Organizations in Nigeria incorporate town associations, women affiliation, peer gatherings, credit gatherings, social clubs, and board of trustees of companies (Adamu, Sodiya, Adeogun and Ogunbameru, 2005). The authors likewise reported that network based associations give opportunities to individuals to relate with their condition.

Fish is extremely rich in protein yet it has high rate of decay (Abowei, 2011). Adequate preparation of fish is imperative when brilliant, greatest supplement maintenance and most extreme benefit are to be accomplished (Davis and Davis, 2009). According to Davis *et al.* (2008) prepared fish are still kept away in the customary store rooms while deficient fish taking care of, handling procedures and storage spaces contribute incredibly to low supply of fish to dwellers that form three quarters of the population in developing countries. The vast majority of fishing communities in Nigeria are situated at the Atlantic coastal area of the southern part of the country with various streams found in the inland part where fishing activities take place. These areas are usually far from city centres' where there are ready market for their goods and storage facilities. Notwithstanding, when they are close, there is still high temperature and humidity which leads to fast crumbling of fish (Shitta 1990 in Abowei, 2011). Ibrahim, Kugbu and Mohammed (2011) reported that fish processors help to reduce post-harvest losses and provision of fish throughout the year. However, these are limited by absence of capital and improved fish preparing innovation. Fish processors cooperatives are seen as conceivable answer for the issues of fish preparing and maintaining equity in small scale fishing community. Therefore, this study is aimed at identifying areas of intervention of CBOs on fish processors, determining the effect of the CBOs activities on income of fish processors as well as identify constraints faced by fish processors in the study area.

2. Literature Review

2.1 Interventions of Community Based Organization (CBOs) to their Members

Arua (2004) saw CBOs as a critical apparatus of improving state of farmers. According to Bhuyan (2007) CBOs are extraordinarily observed as huge instruments for creation of jobs and for tackling of assets for income generation. Levis (2007) announced that CBOs engage in excess of 100 million people around the world. In Nigeria, CBOs give privately required

administration, work and contribution to farmers; CBOs additionally give chances to farmers to sort out themselves. Nweze (2002) reported that cooperative societies fill in as a vehicle for input dissemination. Through their activities across the nation structure, they have built up a solid and dependable game plan for dissemination of food crops, manures, agro chemical , credits, seeds and seedlings.

Cooperatives in Nigeria perform multipurpose functions. They are involved in production, processing, marketing, distribution and financing of agricultural product. The most popular agricultural cooperative societies in Kogi State of Nigeria include; group farming cooperative, marketing cooperatives, agricultural thrift and credit cooperatives and agricultural processing cooperative, consumer protective, fisheries cooperatives and farmers multipurpose cooperative. Agriculture is mostly practised in Kogi State by peasant farmers producing the bulk of food, fuel and fiber needs of the population. Rural farmers in Kogi State like their counterpart in other part of Nigeria are trapped in perpetual poverty, malnutrition, unemployment and mass drift from rural to urban area (Ibitoye, 2013).

Onyeozu (2010) reported that CBOs in Rivers State assisted in construction of town halls, drilling of bore holes, construction of market stall which has help the inhabitants to keep their wares away from flood and other adverse weather condition. Increase in farm income, improvement in general living condition, improved farm output, easy access to agricultural credits from banks, education and training and easy access to farm output are some of the benefits derived by members of CBO (Ibitoye, 2013). A study conducted by Abegunde (2004) on the activities of the CBOs in Atiba Local Government Area of Oyo State, Nigeria revealed that there were about 160 CBOs in the area. About 40% of these CBOs provided social facilities worth 17.56 million naira to their direct community. In the same light, CBOs in the state were said to be cautiously buoyant enough to have constructed access roads within their neighborhoods, built schools and health centres, provide potable water and see to the general welfare of their members without government’s assistance (Adejumobi, 1991).

3. Methodology

The research was carried out in Kogi State, Nigeria. Farming is the predominant occupation of the people in this area. The study employed a multi-stage sampling technique. In the first stage, one Local Government Area (LGA) was purposively selected from each of the four agricultural zones (A, B, C and D) due to their high level of participation in fish processing activities and the list was obtained from Kogi State Agricultural Development Project. In the second stage, four communities were randomly selected from each of the selected LGAs, giving a total of 16 communities. The communities included Aguda, Lokoja, Ajakuta and Abuyim from Zone A, Shintaku, Ikende, Bagana and Kanga from Zone B, Koton-Karfe, Giryra, Edeha and Gemata from Zone C and Idah, Odeke afam, Alloma and Itobe from Zone D. In the third stage, from a sample frame of 370 processors, a sample size of 192 fish processors was determined proportionately using Yamane’s formula (1997):

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

Where:

n = sample size

N = finite population

e = limit of tolerable error (level of significance = (0.05)

1 = constant

Data for this study were collected through primary sources. The primary data were obtained using questionnaire and interview schedules. The data collected were on socio-economic characteristics of the respondents which included age, sex, level of education, size of family, years of processing knowledge, membership of co-operative society and limitations faced by the fish processors. Data were evaluated using descriptive statistics and Ordinary Least Square (OLS).

3.1 Model Specification

The Ordinary least squares (OLS) model was used to determine the relationship between a dependent variable and a collection of independent variables. The value of a dependent variable was defined as a linear combination of the independent variables plus error terms, application of regression analysis existed in almost every field.

$$Z = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, e_i) \dots \dots \dots 2$$

Explicitly the model is specified as;

$$Z = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + u \dots \dots \dots 3$$

Z= income (₦)

The independent variables include;

X₁=Training (1 if yes, 0 otherwise)

X₂=Credit (₦)

X₃=Marketing information (number)

X₄=Processing equipment (1 if yes, 0 otherwise)

X₅= Extension services (number of contacts)

X₆=Provision of shops (1 if yes, 0 otherwise)

X₇=Storage facilities (number)

b₀ = constant

b₁- b₇ = coefficient to be estimated

u = error term

4. Results and Discussion

4.1 Descriptive Statistics

The result of socio – economic characteristics of fish processors in Table 1 indicates that the mean age of all fish processors was 40 years implying that fish processors were in their most active and useful age. This suggests probability of active involvement in their various organizations. The outcome is in consonance with the results of Komolafe (2012) who stated that majority of the fish processors in Obatoko were within the age of 30-40 years while entirely the sampled fish processors in the study area were female. The greater proportion of female in fish processing activities in the study area showed that the business was gender subjective and sensitive. The female supremacy of this means of livelihood

might be due to the various activities involved in the processing activities while their male equals are mostly involved in fishing activities. The result is in line with the outcomes of Komolafe (2012) who described that all the fish processors in Obatoko were female. Greater part (81.3%) of the fish processors was found to be married, 13.5% were widow, 3.6% were single, and 1.6% was separated. The high percentage of the married fish processors could be as a result of the active age range of between 41-50 years of the majority of the respondents. The result is in agreement with the results of Olapade (2012) who discovered that bulks of fish processors in Asejire were married. All the fish processors sampled had one type of education or the other (i.e informal and formal). Bulk (58.9%) of the fish processors had Quranic education, 20.8% had primary education while 20.3% had secondary education. This suggests that bulk of the fish processors had no formal education. This finding concurs with Ibrahim *et al.* (2011) who revealed low dimension of education among the fish processors. The finding is additionally upheld by Aqeela, Tanuir and Muhammed (2005) who detailed that two third of the one billion ignorant people on the planet are women and girls.

The outcome additionally uncovers that the mean family size of the fish processors was 4 individuals. The outcome recommends that the fish processors have little family sizes. This outcome is in accordance with Komolafe (2012) who detailed that 80% of fish processors in Obatoko had family unit size of between 4-6 people. The outcome further uncovered that the mean years of experience for the fish processors was about 18years. The outcome infers that fish processors in the study area were very much experienced in this way they have sufficient information of fish handling exercises to mitigate their destitute conditions. This outcome is in concurrence with that of Olapade (2012) who announced that fish processors have experience of between 6-15 years.

Table 4.1: Socio-economic characteristics of fish processors in the study area

Variables	Frequency	Percentage	Mean
<i>Age</i>			
11-20	3	1.60	40.
21-30	34	17.70	
31-40	59	30.70	
41-50	75	39.10	
>50	21	10.90	
<i>Sex</i>			
Female	192	100	
Total	192	100	
<i>Marital status</i>			
Single	7	3.60	
Married	156	81.30	
Widow/Widower	26	13.50	
Separated	3	1.30	
Total	192	100	
<i>Level of Education</i>			
Quranic	113	58.90	

Variables	Frequency	Percentage	Mean
Primary	40	20.80	
Secondary	39	20.30	
Total	192	100	
<i>Household size</i>			
0-5	148	77.10	4
6-10	44	22.90	
<i>Years of Experience</i>			
1-5	10	5.20	18
6-10	40	20.80	
11-15	47	24.50	
16-20	37	19.30	
>20	58	30.20	
Total	192	100	
<i>Sources of capital</i>			
Friends	52	27.10	
Personal saving	123	64.10	
CBOs	17	8.90	
Total	192	100	
<i>Amount of Credit Received</i>			
0-25000	80	41.70	30177.08
26000-50000	112	58.30	
Total	192	100	

Source: Field survey, 2015

Furthermore, the table demonstrates that larger part (64.1%) of the fish processors had their capital through personal saving. About 27.1% said they got their capital through friends while 8.9% got theirs through CBOs. This might be because of the way that a large portion of them began their fish processing business before the coming of the various CBOs. The outcome is bolstered by Olaolu et al. (2013) who revealed that individual saving and cooperatives were the predominant sources of funding for food crop and livestock farmers. Akinleye (2013) likewise announced that fish processors had no entrance to bank credit. The inability of fish processors to access loan cash from banks might be linked to the issue of guarantee security and different bottlenecks. The mean amount of credit accessed by fish processors was ₦30,177.08. This suggests that respondents got low credit from associations and deficient measure of loan granted to the respondents can prompt advance diversion or limit their capacity to fund their marketable strategies along these lines thereby influencing their yield and profitability adversely. This result is in accordance with the findings of Victor and Ineye (2011) who reported that farmers who received less than ₦40,000 as credit tended to divert the fund for other purposes while International Fund for Agricultural Development (IFAD) (2010) reported that women received less than a tenth of the credit received by men.

4.2 Areas of interventions of Community Based Organizations (CBOs).

Table 4.2 demonstrates the distribution of fish processors as per the regions of mediation of CBO in the study zone. The fish processors concurred that there was one type of mediation or the other from the CBOs. In Table 4.3, 74.5% of the fish processors indicated that market stalls were built by the CBOs. Some current CBOs in the study zone were Atoku-ojoo Multipurpose Co-operative Society, Oruwagi Multipurpose Cooperative Society, Enemona Fish Processors Cooperative Society, Ogonegbecha Women Fish Processors Association, Adagbatokuli Multipurpose Cooperative Society and Okpareke Women Fish Processors Association.

Correspondingly, 54.7% of the fish processors announced that CBOs completed support of activity of streets in their locale to deal with transportation needs. Moreover, 30.2% of fish processors stressed that CBOs embarked on provision of furniture and learning materials for schools in their localities. Different areas of mediation of CBOs were arrangement of health care centers (9.9%), upkeep and redesign of town corridor (9.9%) and arrangement of drill openings (4.7%). The outcome is in accordance with Onyeozu (2010) who announced that CBOs in Rivers State aided the development of town corridors, penetrating of bore holes and building of market stall which has help the occupants ward off their products from flood and other antagonistic climate condition. Abegunde (2004) likewise reported on the activities of the CBOs in Atiba Local Government Area of Oyo State and revealed that 40% of the CBOs in the investigation territory gave social facilities to their immediate community.

Table 4.2: Distribution of fish processors according to areas of intervention by CBOs

Areas of intervention	Frequency	Percentage
Building market stall	143	74.5
Provision and searching for bore hole	9	4.7
Building and renovation of town hall	19	9.9
Maintenance of community roads	105	54.7
Provision of health centers	19	9.9
Provision of furniture and equipment to schools	58	30.2

Source: Field survey, 2015

Multiple responses recorded

4.3 Effect of Community Based Organizations on income of fish processors

The Ordinary Least Square regression (OLS) was used to analyze the effect of CBOs on income of fish processors. The outcome in Table 4.3 demonstrates that fish preparing equipment was positive and noteworthy at 5%. This suggests an expansion in the arrangement of processing equipment will prompt increment in the respondents' income. Processing equipment given by the CBOs to fish processors will in general increase the quality and amount of prepared fish which therefore increase their income. The result is consonance with the findings of Woelcke (2006) who detailed that selection of new advances expands the efficiency of fish processors. Moreover, shops given by the CBOs were likewise positive and significantly affected the income of fish processors. This

suggested that the arrangement of shops for fish processors empowered them to showcase their products well, which procured them more income. Training then again was negative and positive at 5%. This suggested that an expansion in training of fish processors would prompt decline in their income. This may be credited to the way that the fish processor didn't get subjective training on the best way to go about their business from CBOs

Table 4.3: OLS Regression of effect of CBOs activities on income of fish processors

Variable	Coefficients	Standard error	t-value	p-value
Training	-36257.68**	14993.81	-2.418	0.0166
Credit	-0730053	0.57	-1.280	0.2021
Market information	11449.50	17310.42	0.661	0.5095
Processing equipment	30320.81*	15846.23	1.913	0.0572
Extension contact	783.91	14872.75	0.053	0.9580
Shops	31214.34**	16543.77	1.887	0.068
Storage facilities	5512.06	14296.25	-0.386	0.7003
Constant	252044.23***	29210.19	8.629	0.000

Source: Field survey, 2015; Number of obs = 192; * Significant at 10%, ** Significant at 5% Prob> F = 0.0000, *** Significant at 1%, R-square = 0.6469, Adjusted R² = 0.2912

4.4 Distribution of respondents according constraints faced by fish processors

Table 4.4 uncovers the dispersion of fish processors as indicated by constraints faced by them. The challenges experienced by fish processors among others were insufficient capital (86.5%), mind-boggling expense of transportation (41.7%), time spent in preparing (34.9%) and sufficient consideration required amid fish handling (30.2%). In positioning request, deficient capital positioned first which propose that bulk (86.5%) of the fish processor in the study zone need satisfactory adequate capital to complete or extend their business. Besides, inaccessibility of credit positioned second and this may be ascribed to the reluctance of money related organization to give advance to fish processors because of lack of collateral. The outcome is in accordance with the discoveries of Ibrahim et al. (2011) who announced that absence of guarantee to acquire bank loans was one of the issues of fish processors in the study area. Furthermore, mind-boggling expense of transportation positioned third. This was likely because large portion of the fish processors in the investigation area lived in rural areas and had to transport themselves to major road sides or town ship market in order to sell their products. Smoke contamination positioned fourth in the positioning of challenges faced by the fish processors. Smoke contamination as per fish processing frequently caused redness and swelling of the eyes. Time spent in handling fish is positioned fifth. This may be ascribed to the way that most fish processors still utilized the customary technique in preparing their fish. The recognized challenges were in accordance with the discoveries of Oluwatoyin et al. (2010) who announced that processors in South-Western Nigeria distinguished inaccessibility of capital, transportation issue, and smoke contamination as a portion of the requirements going up against them. Different limitations recognized were

strict consideration required in fish preparing (30.2%), high perishability nature of fish (25.5%), and mind-boggling expense of fish (5.2%).

5. Conclusion and Recommendation

5.1 Conclusion

This study assessed services provided by CBOs on income of fish processors in Kogi State of Nigeria. Taking everything into account, areas of intervention of CBOs in the studyzone were building of market stalls, maintenance of roads, arrangement of furniture and equipment for schools. The outcome further uncovered that processing equipment and shops given by the CBOs had huge impact on the income of the respondents while training had a negative association with the respondent's income. However, some challenges faced by fish processor were lack of capital and mind-boggling expense of transportation.

5.2 Recommendations

- i. Since it is women overwhelmed business, CBOs ought to be bolstered and reinforced by government and cash loaning foundations by providing them with advances which will help in empowering them.
- ii. Improved processing equipment ought to be given by association in order to help support their individuals business.
- iii. The measure of credit given to individuals ought to be expanded by the associations so as to prevent the incidence of loan divert.

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The Relationship between Financial Development and Economic Growth in Nigeria: Linear and Non-Linear Approaches

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Abstract

The paper re-examines the relationship between financial development and economic growth in Nigeria. Both conventional ARDL and the new Non-Linear ARDL approaches to cointegration were utilized over an annual data covering 1980 to 2016. The empirical result shows that relationship between financial development and economic growth is asymmetrical. The results further suggest that the current effort by government towards developing the economy as contained in the economic recovery plan (ERGP) needs to consider nonlinearities in modeling macroeconomic relationships.

Keywords: Finance, Economic Growth, ARDL, Non-Linear ARDL, Nigeria

JEL Classification: E42, O10

1. Introduction

The relationship between financial development and economic growth has been a central issue of focus to researchers and policy makers. Studies on financial development and economic growth relationships got its origin from the pioneering works of Goldsmith (1969), McKinnon (2010) and Shaw (1973). Certain theorists have placed emphasis on the significance of financial development in enhancing investment chances, lowering investment in liquid but unproductive resources, mobilizing savings, enhancing technological innovation and refining risk taking. King and Levine (1993) contend that where enterprises lead, finance follows. Accordingly, economic growth creates demand for certain form of financial arrangements and the financial system responds automatically to these demands.

Studies on financial development and economic growth employing time series data were carried out for the UK, US, Japan, Canada, Netherlands and few other developed countries. However, few studies (Ndebbio, 2004; Nnanna, 2004; Nzotta & Okereke, 2009; Afangideh, 2009; Odeniran & Udejaja, 2010; Oniovwote & Eshienake, 2012) were carried out in Nigeria in particular. The few studies on Nigeria showed that the issue of financial development and growth in Nigeria is yet to be resolved. Most of the studies concluded that financial sector development has no significant impact on economic growth while few others provided

evidence to support that economic growth promotes financial development (demand-leading hypothesis). A cursory look at those studies show that they focus on the linear models. The early stage of Nigeria's financial sector development was characterized by public ownership and control of the sector. In 1986 resulting from rapidly worsening economic circumstances, Nigeria commenced an economic reform program backed up by World Bank and International Monetary Fund (IMF). The program focuses on adjusting the country structurally to attain a private sector driven growth through a market oriented system. Financial system liberalization forms an important aspect of the reforms. Though the reform attains some success in liberalizing the financial sector, the positive effect of growth on investment appears to be intermittent, whereas the Nigerian financial system continues to be shallow and somewhat underdeveloped (Renhert & Tokatlidis, 2003). In 2004, Nigeria embarked on banking sector consolidation drive under the National Economic Empowerment and Development Strategy (NEEDS). In 2009, following the global financial crises, the Central Bank of Nigeria (CBN) together with government fiscal authorities initiated measures aimed at averting a total failure of the financial sector and foster economic growth. This study contributes to the literature by investigating both the symmetric and asymmetric relationship between financial sector development and Nigeria's economic growth.

The objective of this paper is to investigate the relationship between financial development and economic growth in Nigerian. Thus this study adopted the Non-Linear Autoregressive Distributed Lag (NARDL) model of Shin *et al.* (2014) to explore the relationships between financial development and economic growth.

The remainder of this paper is structured as follows. Section two reviews literature, section three is the data and methodology of the study while section four presents the results and discussion of the findings. Section five provides the summary and conclusion of the study.

2. Literature Review

The argument that financial sector advancement drives economic progress stresses the role of funds in financial intermediation and its impact on economic growth (Schumpeter, 1934). Studies on financial development and economic growth nexus present conflicting conclusions. King and Levine (1993), Hassan *et al.* (2011), Nyasha and Ochiambo (2015), Estrada *et al.* (2010), Gondo (2009), Madsen *et al.* (2018), Anwar and Nguyen (2011), Adu *et al.* (2013), Arestis *et al.* (2015) found that financial development stimulates economic growth. On the other hand, Odhiambo (2005), Liang and Teng (2006), established a causality in the opposite direction (i.e economic growth causes financial development). Others like Demetriades and Hussein (1996), Hassan *et al.* (2011) Kar *et al.* (2011), Jedidia *et al.* (2014) found a bi-directional causality between financial development and economic growth. The conflicting results of these researches indicate that the relationship between financial development and economic growth could vary on the basis of a country, methodology or data used. The important role of financial system is key in any nation basically because moneys are routed to the economic units with productive investment prospects (Schumpeter, 1912). The major hindrance to an effective working of a financial structure is asymmetric information (Andersen & Tarp, 2003; Stiglitz, 1998; Asongu &

Moor, 2017) leading to two problems in the financial markets; adverse selection or moral hazard.

Hassan Sanchez and Ya (2011) employing panel data technique on the data of low and middle income countries covering 1980 to 2007 established that financial development impact positively on developing economies. Nyasha and Odhiambo (2015) using UK data spanning 1980 to 2012 adopted the ARDL bound test to study the impact of financial development on economic growth. They concluded that financial development impacts economic growth negatively. In their studies, Estrada et al. (2010) applying panel data technique on 125 countries concluded that financial structure advancement has a positive influence on growth performance. In the African context, Gondo (2009) using a Robust standard error on the South African data for 1970 to 1999 established that financial markets development enhances economic growth in South Africa. Djoumessi (2009) concluded that financial development bears positive and long run association with economic growth for Cameroun and South Africa over the period 1970 to 2006. In a similar study, Anwar and Sun (2011) showed a positive with significant association between financial development and economic growth in Malaysia. Abida et al.(2015) established a robust positive relationship between financial development with economic growth in North Africa. They employed panel General moment's method (GMM) technique on the data covering 1980 to 2012. Arestis and Demetriades (1996) investigated the financial development-growth nexus in twelve countries. They inferred that the direction of causality depends on the variable employed and that every country exhibits a variant result.

Empirical studies on the Finance-growth nexus in Nigeria are limited not only in quantity and scope but in data and methodology. Ndebbio (2004) found that financial advancement bears weak influence on the per capita growth of output. He applied ordinary Least squares (OLS) technique in his analysis. Nnanna (2004) established that financial development has no meaningful effect on output growth. Nzotta and Okereke (2009) using annual data covering 1986 to 2007 also established that development in financial sector has no impact on Nigeria's economic growth. Nonetheless, Afangideh (2009) using a time series data for 1970 to 2005 with three stage least square method concluded that a well advanced financial structure removes growth financing restraints through raising bank credit with investment activities thereby raising up output. Odeniran and Udeaja (2010) examines the financial structure development and economic growth adopting Granger causality and vector autoregressive (VAR) technique for 1960-2009. They established a birectional causal relation amongst financial development with economic growth. Oniovwote and Eshienake (2012) using cointegration and error correction mechanism investigated the effects of financial structure development on economic advancement in Nigeria over the period 1990-2011. They concluded that financial development has no significant influence on economic growth.

From evidence on the available literature, all studies on finance-economic growth nexus were modelled based on the linear framework. However, considering the existence of non-linearity behavior in time series modelling, we employed a non-linear approach to modelling the relationship. This is because when a time series variable components (positive with negative) appeared to be associated, then the time series might exhibit a hidden

cointegration (Granger & Yoon, 2002). The presence of asymmetry in financial development and economic growth relationship triggers the need to use a nonlinear cointegration procedure to investigate the relationship among the series.

3. Methodology

The study adopted the ratio of broad money to GDP as proxy for the financial development following Hassan et al. (2011). Equally in line with Hassan et al. (2011), the study used GDP as a proxy for economic growth. This is considered as a standard measure by the World bank (World Bank, 1989). Data for the variables covering the period 1980 to 2016 were obtained from World Bank indicators.

In accordance with current studies, the variables; FD, GDP and EXR data were converted into their natural logarithmic (ln) usage, so that the estimated coefficients signify efficient elasticities. A log-linear model is usually expressed thus;

$$\ln GDP_t = \beta + \delta_1 \ln FD_t + \delta_2 \ln EXR_t + \mu_t \dots\dots\dots 1$$

where GDP_t , the economic growth proxied by Gross domestic product, FD_t is financial development computed by the ratio of broad money to GDP, EXR_t is exchange rate for local currency. Subscribe t stands for time period, while U_t is a stochastic error term.

From equation (1) we can derive the empirical model for ARDL to explore the relationship amongst financial development with economic growth in the context of Nigeria. Hence,

$$\Delta \ln GDP_t = \alpha_0 + \sum_{i=1}^p \sigma_1 \Delta \ln GDP_{t-i} + \sum_{i=0}^q \sigma_2 \Delta \ln FD_{t-i} + \sum_{i=0}^r \sigma_3 \Delta \ln EXR_{t-i} + \vartheta_1 \ln GDP_{t-1} + \vartheta_2 \ln FD_{t-1} + \vartheta_3 \ln EXR_{t-1} + \mu_t \dots\dots\dots 2$$

Equation (2) depicts error correction model that shows both the short as well as long run coefficients. Here Δ is a first-difference operator, α_0 is a constant, σ_1, σ_2 , and σ_3 represents coefficients for short run estimates. While, ϑ_1, ϑ_2 and ϑ_3 represents long run dynamic association, and μ_t is the stochastic error term. p, q and r represents the lag lengths for the series in the model for distributed lag. To capture an asymmetric impact of financial structure development on economic growth, a linear equation (2) can be transformed into an asymmetric form by replacing FD_t by its positive and negative components thus;

$$\Delta \ln GDP_t = \alpha_0 + \sum_{i=1}^p \sigma_1 \Delta \ln GDP_{t-i} + \sum_{i=0}^q \sigma_2 \Delta \ln FD_{t-i}^+ + \sum_{i=0}^r \sigma_3 \Delta \ln FD_{t-i}^- + \sum_{i=0}^s \sigma_4 \Delta \ln EXR_{t-i} + \vartheta_1 \ln GDP_{t-1} + \vartheta_2 \ln FD_{t-1}^+ + \vartheta_3 \ln FD_{t-1}^- + \vartheta_4 \ln EXR_{t-1} + \mu_t \dots\dots\dots 3$$

In accordance with Shin et al.(2014), financial development variable FD_t is decomposed into its increasing and decreasing partial sums as;

$$FD_t = FD_0 + FD_t^+ + FD_t^- \dots\dots\dots 4$$

Where FD_t^+ and FD_t^- symbolizes the partial sum of a positive (an increase in financial development) and the negative changes (a decrease in Financial development). Nonetheless, the partial sums for positive as well as negative changes in FD_t are generated through following formulas;

$$FD_t^+ = \sum_{i=0}^t \Delta FD_i^+ = \sum_{i=0}^t \max(\Delta FD_i, 0) \dots\dots\dots 5$$

$$FD_t^- = \sum_{i=0}^t \Delta FD_i^- = \sum_{i=0}^t \min(\Delta FD_i, 0) \dots\dots\dots 6$$

The long run asymmetric impact can be tested with the use of Wald test by evaluating the Null hypothesis for an asymmetry $H_0 : \mathcal{G}^+ = \mathcal{G}^-$ against an alternative for an asymmetry $H_1 : \mathcal{G}^+ \neq \mathcal{G}^-$. Rejection of Null hypothesis shows a presence of asymmetrical impact of financial structure development on economic growth. A long run impact of an increase or decrease in financial development are provided by $\beta_2 = \frac{-\mathcal{G}^+}{\alpha_0}$ and $\beta_3 = \frac{-\mathcal{G}^-}{\alpha_0}$ respectively.

Also, $\sum_{i=0}^s FD_i^+$ and $\sum_{i=0}^s FD_i^-$ captures the influence in short run of an increase and decrease in Financial advancement. Therefore, we also capture the asymmetric short run effect of financial expansion changes on economic growth.

A Wald test is use in testing cointegration amongst the series Wald-F test expressed thus, $H_0 : \alpha = \mathcal{G}_0 = \mathcal{G}_1 = \mathcal{G}^+ = \mathcal{G}^- = 0$.

The NARDL model has certain advantages over other techniques such as ECM, Markov-Switching ECM, a Threshold ECM and Smooth transition ECM. This is because NARDL jointly model cointegration dynamics and the asymmetries in a variable of interest. Apart from being simple in estimation, it equally provides a flexible framework by lessening the assumption that variables have to possess same order of integration, which differs with ECM that requires this condition to hold (Katrakilidis & Trachanas, 2012). The technique is also suitable for this study since it distinguishes between a linear and non-linear cointegration, unlike the Pesaran et al. (2001) ARDL and other cointegration methods that simply presume a linear or symmetric effects of the variations of an independent variable over the dependent variable (Fousekis, Katrakilidis & Trachamas, 2016). Katrakilidis and Trachanas (2012) observed that the Shin et al. (2014) NARDL outperforms other cointegration techniques in testing small samples cointegration as the case with our study. Several works have employed this method to investigate whether a decrease or an increase in independent variable bears a different influence on the dependent variable (for e.g see Fousekis et al, 2016, Bahmani-Oskooee & Ghodsi, 2017, Ali, Shan, Wang & Amin, 2018). Following these studies, we specify and estimate a non-linear model to capture a possible asymmetric effect of financial development on the Nigeria’s economic growth.

4. Results and Discussion

For purpose of comparison, we estimated both the conventional ARDL and the NARDL. To do this we first established the integration order of the variables in the model to make sure none is I(2). We employed the ADF and a PP Unit root tests. Table 4.1 presents the results which indicates that the variables are all I(1), none is at I(2) level. More so, both tests have shown that our dependent variable (GDP) is I(1) thereby meeting up with precondition of Pesaran et al.(2001) to undertake an ARDL cointegration tests. We then proceed to estimate the linear ARDL and the outputs are presented in Table 4.1.

Table 4.1: *Unit Root Tests*

A: Augmented Dickey Fuller				
Variable	Level		First Difference	
	Intercept	With Trend	Intercept	With Trend
LGDP	-0.3203	-1.9193	-5.4162***	-5.3407***
LFD	-0.5671	-2.1798	-3.5226***	-3.4537***
LEXR	-1.7650	-1.1184	-5.0936***	-5.3524***
B: Phillip-Peron				
LGDP	-0.3243	-2.1574	-5.4106***	-5.3325***
LFD	-0.2412	-2.0670	-3.6773***	-3.5955***
LEXR	-1.7690	-1.1857	-5.0937***	-5.3798***

*Note: ***, **, and * imply significance at 1%, 5% and 10% levels respectively. The figures show the t-statistic value for testing the null hypothesis that the variable possess a unit root. The Schwarz Information Criterion (Schwert, 1987) is used in the lag length selection. The critical values for constant without trend are -3.479, -2.883 and -2.578 while that of constant with trend are -4.028, -3.443 and -3.146 for 1%, 5% and 10% respectively. For PP the bandwidths are determined based on the Newey-West using Bartlett Kernel. The critical values for constant without trend are -3.479, -2.883 and -2.578 while that of constant with trend are -4.028, -3.443 and -3.146 for 1%, 5% and 10% respectively. The figures are based on Mackinnon (1991).*

Examining long run relationship in an econometric model is sensitive to optimal lag selection (Bahmani-Oskooee & Bohl, 2000). Along this proposition, Stock and Watson (2012) established that employing fewer number of lags could not include most vital facts from the set model, also using additional lags tends to over-fit the model. Thus, we employed 2 optimal lags based on Schwarz Information Criteria (SIC) to estimate the model in equation (2). Table 4.2 presents the results. A bound test for cointegration outputs are presented in the respective tables. The F-statistic value of 2.86 in table 2 shows absence of long run cointegration since the F-statistic is below the lower bound critical figure. Looking at effects of financial development on economic growth one may conclude that there is no significant impact over the period. Results on Table 4.2 Panel A depict short run results. The coefficients in the short run failed to be statistically significant across all lags excepts in lag 3 for financial development. Exchange rate bears a significantly negative coefficient. In panel B, long run estimates, financial development is insignificant which might not be unconnected to misspecification of the model. However, this might be due to the symmetric

assumption of the conventional model. The result might appear different if the relationship is modelled in an asymmetric form. For that, we estimate equation (3) by imposing a highest of two 2 lags to every first-difference variable using SIC criteria. The outputs are shown in table 4. From the table, short run estimates in Panel A indicate that the coefficient of the FD_t^+ which represents an increase in financial structure development is highly significant and positive. This confirms the asymmetric impact of financial development on the economic growth in Nigeria over the short run period. The error correction term is significant and negative signifying the existence of strong long run association between financial sector development with economic growth.

Table 4.2: Linear ARDL Estimates

<i>Panel A: Short-Run Coefficients</i>					
Lag order	0	1	2	3	
ΔLFD	0.38(0.15)	0.72(0.03)	0.55(0.10)	-0.71(0.01)	
$\Delta LEXR$	-2.67(0.02)	1.05(0.01)	0.33(0.00)	-	
ECT_{t-1}	-	-1.28(0.00)	-	-	
<i>Panel B: Long-Run Coefficients</i>					
	LFD	LEXR		Constant	
	0.43(0.13)	-0.52(0.07)		5.81(0.00)	
<i>Panel C: Diagnostic Tests</i>					
F	LM-Test	BGP Test	RESET	NORMAL	CUSSUMS
2.86	1.13(0.56)	3.67(0.88)	0.12(0.01)	1.78(0.41)	Stable

Note: a) Number in parenthesis are p-values; b) F= Bound test for cointegration. Upper bound critical values for F-Statistics at 5% level is 4.35 obtained from Pesaran et al (2001); c) LM=Langrange Multiplier test for serial correlation; d) BGP= Breusch-Godfrey test for Heteroscedasticity; e) RESET= Ramsey's Specification test; f) NORMAL= Normality tests based on the test of skewness and kurtosis of residuals

From the table, looking at a long run asymmetric effect for financial sector development on GDP, the coefficient associated with positive FD_t^+ is also positive and highly significant at 1% implying that an upsurge in financial development by 1 percent rises economic growth by 0.42 percent on average. Also it can be observed that the coefficient associated to a decline in financial development (FD_t^-) bears a positive sign suggesting that a 1 percentage decrease in the financial sector development decreases economic growth with about 6.09 percent.

These results show that an increase and a decrease in financial sector development have different influence on Nigeria's economic growth. The results provide further evidence that the effect of financial sector development over economic growth appears to be asymmetric. More so, the Error correction term in the model is negative and highly significant implying that economic growth responds to a long run stable equilibrium. It further confirms an existence of a long run causality from an increase and decrease of financial development and exchange rate to the economic growth.

We investigated whether the effect of increasing financial sector development differs from the decrease in financial development on economic growth in Nigeria. For that, we compared the coefficients of positive deviations with that of negative deviations in the model. From the result a one percentage increase in the financial development results into 0.43% increase in the GDP growth. When financial development decreases by one percentage point, the GDP response through a negative change by falling with 6.09%. Looking at the size of the coefficients, the response to the negative changes is larger implying that negative shock in financial development bears a decreasing impact on growth.

Table 4.3: Non- Linear ARDL Estimates

Panel A: Short-Run Coefficients					
Lag order	0	1	2	3	
ΔLFD^+	0.4(0.0)	1.16(0.00)	-	-	
ΔLFD^-	0.1(0.0)	0.15(0.01)	0.27(0.02)	0.13(0.08)	
$\Delta LEXR$	0.6(0.0)	-0.07(0.50)	-0.42(0.0)	-	
ECT_{t-1}	-	-0.11(0.0)	-		
Panel B: Long-Run Coefficients					
LFD^+	LFD^-	LEXR	Constant		
0.4256(0.028)	6.0(0.0)	-0.557(0.060)	1.8510(0.000)		
Panel C: Diagnostic Tests					
F	LM-Test	BGP Test	RESET	NORMAL	CUSSUMS
15.40	1.8(0.4)	1.33(0.85)	2.56(0.45)	1.36(0.50)	Stable
Wald (Joint significance)		Wald(Short run)		Wald(Long run)	
14.47(0.000)		8.692(0.003)		7.15(0.007)	

Note: a) Number in parenthesis are p-values; b) F= Bound test for cointegration. Upper bound critical F value for 5% significance level is 4.01; c) LM= Langrange Multiplier test for serial correlation; d) BGP= Breusch-Godfrey test for Heteroscedasticity; e) RESET= Ramsey's test for specification; f) NORMAL= Normality tests on the basis of skewness and Kutosis of residuals.

As indicated from the table, both FD_t^+ and FD_t^- appears to be highly significant with different sign and size implying that an increase and decrease in financial system improvement has different effect on the nation's growth. Secondly, a presence of asymmetric effects of financial structure development on growth is further established by applying the standard asymmetry test suggested by Shin et al. (2014) through Wald test application. The highly significant F-Statistic (14.47) indicates rejection of the Null hypothesis of symmetric impact of a financial expansion on growth. It is also observed that all diagnostic tests associated with the asymmetric model shows that the model is well specified. The model stability is examined via the CUSUM and CUSUM of squares of recursive residuals tests indicating that the parameters are stable as the value fall inside the 5% critical bands (Figure 1). All these facts present a very strong evidence that implementation of asymmetric model provides valid results to draw further inferences.

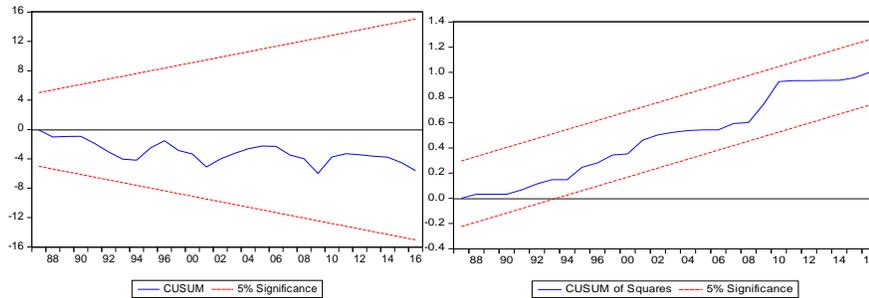


Figure 1 CUSUM and CUSUMQ

5. Conclusion and Recommendation

This paper explored the relationship between financial sector development and economic growth in Nigeria applying annual time series data covering 1980-2016. The empirical results indicate asymmetries relationship between financial sector development and economic growth for both long and short run periods. The study also compares the conventional ARDL with the NARDL approaches to show the superiority of the later over the former. The results of the non-linear ARDL reveal that there is an asymmetric relationship amongst financial expansion and economic growth in Nigeria. The findings of the study are contrary to results of earlier studies (such as Nnanna, 2004, Ndebbio, 2004, Odeniran & Udejaja, 2010, Oniovwote & Eshiennake, 2012) claiming a symmetric relationship. The findings of previous studies are largely limited by the use of linear or symmetric econometric models in their analysis.

The empirical findings suggest that the relationship between financial development and economic growth in Nigeria is asymmetric contrary to the earlier studies that simply assumed the relationship to be symmetrical. The findings further reveal that changes in financial development through an increase or decrease have significant positive influence on economic growth in Nigeria. Overall, the findings of the study suggest that the role of financial development should not be over-emphasized in an attempt to boost economic growth in Nigeria rather it should adopt pro-growth policies to foster financial development.

Government should focus on pro-growth policies aimed at boosting economic growth of the country.

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Industrialization as a Tool for Entrepreneurship Development in Nigeria

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Abstract

The study examines the impact of industrialization on entrepreneurship development in Nigeria using Nigeria as a reference point by covering only North Central of Nigeria. The study used the survey research designs as well as the structured and applied regression model on variables such as improved productive input and entrepreneurship development. Findings of the study revealed that there is significant relationship between industrialization in form of improved productive input and entrepreneurship development using SMEs in North Central Zone, Nigeria. This implies that industrialization in the form of improved productive input contributes significantly to entrepreneurship development in North Central Nigeria among SMEs owners. The study recommends that North Central, Nigeria should start to embrace entrepreneurship and practices of innovation; risk taking, creativity and financing should be properly encouraged to ensure industrialization in terms of improved input. Government should re-strategize to ensure that every member of the society is productive by providing them with productive inputs as well as encourage domestic consumption and use of made-in-Nigeria good. Entrepreneurship development should be encouraged in North Central, Nigeria to bring effective productive input.

Keywords: Industrialization, Entrepreneurship Development, Expansion of Industry, Productive Input, Domestic Consumption.

JEL Classification: L26, O14

1. Introduction

Industrialization is an important and powerful instrument for stimulating entrepreneurship development in developing countries like Nigeria. The substantial and significant progress Nigeria has made in terms of industrialization from-independence has brought various ways

and innovation in aiding entrepreneurship development. Industrialization has been seen as a veritable channel of attaining lofty desirable conception and goals of improved quality of life and the populace (Jalilian, Tribe, & Weiss, 2000). This is because; industrial development involves extensive technology- based development of the productive (manufacturing) system of the economy. Industrialization is a generic name for a set of economic and social processes related to the discovery of more efficient ways for the creation of value in order to ensure the development of entrepreneurs (Jalilian, Tribe, & Weiss, 2000). Industrialization is a way to ascertain that entrepreneurs develop new product, assume risk and finance the most profitable business using productive input such as labour, raw material, capital and domestic consumption that are available to the society through the art of industrialization.

Over the years, Nigerian government has implemented policies that bring industrialization in terms of expansion of industry, productive input such as labour, raw material, capital and domestic consumption in order to ensure that entrepreneurs discover ways to developed their skills such as risk taking, innovation, entrepreneurship training, finance and creativity. Yet, entrepreneurs in Nigeria are skill adopting old ways of doing business without taking risk, innovating product or services and providing adequate training that will ensure creativity in order to finance the business properly. However, the main objective of this study is to examine the impact of industrialization on entrepreneurship development in North Central, Nigeria.

2. Literature Review

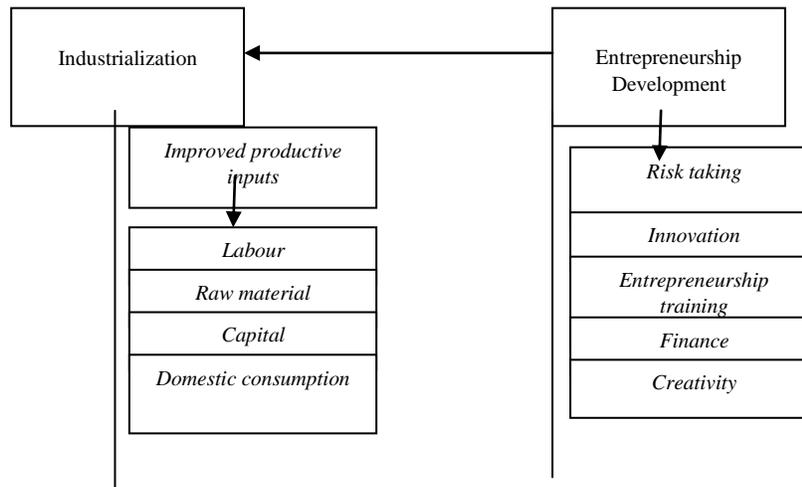
Industrialization is an essential aspect of long-run development in nations that have achieved socio-economic development, though with some attendant environmental consequences (Aneta, 2006). Industrialization is to increase output using the more mechanized system of production. Industrialization is the process of building up a nation's capacity to convert raw materials and other inputs to finished goods for other production or for final consumption (Anyanwu, Oyefusi, Oaikhenan and Dimowo, 1997; Ekpo, 2005).

It also involves the application of scientific methods to solving problems, mechanization and a factory system, division of labour, growth of the money economy, and increased mobility of labour force both geographically and socially (Zurekas, 2001). In this study, industrialization is conceptualized as a process of ensuring advanced productive input such as labour, raw material, capital and domestic consumption into an economy in order to ensure the development of such economy

Entrepreneurial development is productive transformation of an entrepreneur and the ability to identify business opportunities, harness the necessary resources and willingness to initiate and sustain appropriate actions towards actualization of business objectives (Ndechukwu, 2001; McOliver, 1998; Ameashi, 2006). Paul (2013) noted that entrepreneurship is more than starting a business. It is also a process through which individuals identify opportunities, allocate resources, and create value. Entrepreneurship is the manifest ability and willingness of individuals, on their own, in teams, within and outside existing organizations, to perceive and create new economic opportunities, –introduce their ideas in the market in the face of uncertainty and other obstacles, by making decisions on location, form and use of resources and institutions (United Nations Conference on Trade And Development 2005).

Entrepreneurship is “at the heart of national advantage” (Porter, 1990). In this study, entrepreneurship development is conceptualized as a process of risk taking, innovation, entrepreneurship training, finance and creativity in order to provide adequate good and services that have not existed before or adding value to the existing products, ideas or goods and services.

2.1 Conceptual Model



Source: The Researcher

The researchers conceptualize this model by indicating the concept of industrialization and concept of entrepreneurship development. The model explains that entrepreneurship development contributes to industrialization which implies that entrepreneurship development is a function of industrialization. The model further realizes that industrialization is a way of ensuring improved productive inputs in a country by bring about effective labour, good raw material, capital and domestic consumption in order to help entrepreneurship develop by taking risk to invest their capital, innovating product, ideas, goods and services and receive training that makes them effective in discovering new business opportunities and finance the new business by being creative.

The simple theory of industrialization states that two general assumptions are necessary to achieve this. First, output is produced both by skilled and unskilled labour. Second is that households derive benefits from both income (generated from both skilled and unskilled labour) and human capital (generated from the education obtained by children)(Acemoglu, 2008). The theory believes that industrialization is a sure ground for economic growth that ensures entrepreneurship development in making them to produce products with new features and quality.

Jackin (2004) examined the impact of industrialization on entrepreneurship development in the United States of America. He used the survey research method and administered questionnaire to small and medium scale enterprises. The population of the study was the entire SMEs owners in the United States but the researcher determined the sample size by using accidental method of selecting only 300 respondents that participated on the research. The study used regression and the finding showed that there was a significant relationship between industrialization and entrepreneurship development.

In their contribution, Jelilov, Enwerem and Abdurahman (2013) studied the impact of industrialization on economic growth: The ten (10) selected Economic Community of West Africa (ECOWAS) Experience members' states (2000-2013) namely; The Republic of Nigeria, The Benin Republic, Cape Verde, Cote D'voire, The Gambia, Ghana, Guinea Bissau, Mali, Niger and Senegal. The study set three major objectives which included investigating the effect of fiscal and monetary policy on Gross Domestic Product, determining the relationship between government spending and industrial development and to determine the effect of budget on investment or employment generation. The study only utilized secondary data from their respective countries. The study specified a workable model in which GDP was the dependent variable while industrial output, foreign direct investment, interest rate, foreign exchange rate and inflation rate were independent variables. the ordinary least square (OLS) technique, F-test was used as analytical techniques. The study revealed that industrialization has a negative impact on economic growth in Nigeria in the long run. This was confirmed by the F-test value (559.02).

Finally, Lukman (2013) studied the rate of industrial development in developing nations, considering the case of Nigerian small and medium scale business enterprises (SMEs) in order to unlock the potentials that are eminent in the manufacturing sector. A total of 600 SMEs owners and managers were administered questionnaires. The analysis of this research work was based on the opinion of the successful 517 respondents. The result obtained from this research suggested that there were no special techniques employed by the SMEs other than the fact that they were able to manage the situation and still ensure business profitability despite the huge economic deficiencies present in the economy

3. Methodology

This study used primary data by administering questionnaire to owners of SMEs. However, the population of this study was 9580 SMEs owners in North Central Zone of Nigeria. North Central Nigeria is Nigeria because they are centre of Nigeria and the headquarter of Nigeria is located in Abuja. According to Small and Medium Enterprises Development Agency of Nigeria Survey, (SMEDAN) 2013 and this was reduced using Yamane Taro (1967) formula as stated below:

384. The study covered a period of 13 years from 2005-2017 and this period was chosen because it involved the period Nigerian Government started to encourage industrialization. However, this period was also chosen because government of Nigeria made entrepreneurship education compulsory in all institutions of learning in 2006 which was also included at this period. The study is significant to Nigerian Government because it will assist her to ensure proper industrialization in ensuring that productivity input are available for entrepreneurs to use and develop new product or create new ideas in the market. The

study will also benefit entrepreneurs since it would assist them to identify business opportunities through the process of industrialization in Nigeria. The study is also significant because it would fill a research gap in knowledge and help students who want to further carry out research in this area of interest.

Simple random sampling was used to administer questionnaires to respondents because it allows for equal opportunity of the respondents selected. The questionnaires were administered to the respondents in each state of the North Central Zone. The questionnaire was administered on based on proportional method as shown in the table below:

Table 3.1: Proportion of the sample size

State	Population	Proportion	Sample size
Benue	1167	$1167 \times 384/9580$	47
Kogi	844	$844 \times 384/9580$	34
Kwara	226	$226 \times 384/9580$	9
Nasarawa	1120	$1120 \times 384/9580$	45
Niger	1357	$1357 \times 384/9580$	54
Plateau	2180	$2180 \times 384/9580$	87
FCT	2690	$2690 \times 384/9580$	108
Total	9580	-	384

Source: Researchers Computation

The questionnaire used five point Likert scale with strongly agreed represented by 5, agreed by 4, undecided by 3, strongly disagreed by 2 and disagreed by 1.the questionnaires were administered to ascertain the return rate as presented on the table below:

Table 3.2: Return Rate of the Respondents

Responses	Questionnaires Administered	Questionnaire Returned	Percentage (%)
Male	119	96	34.53
Female	265	182	65.46
Total	384	278	100

Source: Field Survey, (2019)

The table shows that 34.53% of the respondents are male owners of SMEs-and 40.48% of the respondents are female owners of SMEs.

The study also tested for reliability and it is shown in the table below:

Table 3.3: Scale Reliability of Variables

Variables	Items	Cronbach's Alpha
Productive Input		0.87
Entrepreneurship Development		0.92

Source: researcher's computation (2019)

Based on the result shown in the table above, the variables have Alpha value above 0.7, which means that all variables in the instrument are deemed reliable which implies that a minimum Cronbach's Alpha value of 0.7 is stated to be reliable (Ritter, 2010). The

regression analysis is used to determine whether there is a relationship between industrialization and entrepreneurship development. The model is stated below:

$$PRII = \alpha + \beta_1 ED + \mu \dots\dots\dots 1$$

Where:

PRII= Improve Productive Input (productive input of labour, Raw material use in production of modern goods, capital and domestic consumption).

a = constant

β_1 = Coefficient

ED= Entrepreneurship Development (innovation, creativity, risk taking and finance).

μ = Error term

4. Data Analysis

Tables 4.1: Assessing the Improve Productive Input

Items	SA	%	A	%	U	%	DA	%	SDA	%	Total
1	101	36.33	89	32.01	11	3.95	21	7.55	56	20.14	278
2	118	42.44	77	27.69	5	1.79	19	6.83	59	21.22	278
3	122	43.88	59	21.22	10	3.59	19	6.83	68	24.46	278
4	114	41.00	79	28.41	5	1.79	29	10.43	21	7.55	278

Source: Fieldwork, 2018

From the above table, 1 represents that productive input of labour has improved because of industrialization, 2 represents that raw material use in production of modern goods has improved, 3 represents that capital was available everywhere even on the internet due to industrialization and 4 represents that domestic consumption was encouraged because of industrialization.

Table 4.2: Mean of Improve productive Inputs

Variables	5	4	3	2	1	FX	N	Mean	X- \bar{X}	(X- \bar{X}) ²	Sectoral Mean	Sectoral SD
Labour	101	89	11	21	56	278	992	3.56	0.01	0.0001		
Raw material	118	77	5	19	59	278	1010	3.63	0.08	0.0064		
Capital	122	59	10	19	68	278	972	3.49	-	0.0036	3.55	0.011
Domestic Consumption	114	79	5	29	21	278	980	3.52	-	0.0009		
									0.06			
									-			
									0.03			

Source: Author's Computation

The table above also explains the acceptability of the variables used in the analysis: productive input of labour has improved because of industrialization, raw material use in production of modern goods has improved, capital was available in the bank due to industrialization and domestic consumption was encouraged because of industrialization and the analysis confirmed this, implying that at a mean value of 3.55 and a standard deviation of 0.011 signify that improved productive input is unique since the sectoral mean is more than average and also all the mean are within the acceptable level.

Tables 4.3: Assessing Entrepreneurship Development

Items	SA	%	A	%	U	%	DA	%	SDA	%	Total
1	110	39.56	99	35.61	2	0.71	17	6.11	50	17.98	278
2	111	39.92	101	36.33	3	1.07	17	6.11	46	16.54	278
3	107	38.48	74	26.62	10	3.59	19	6.83	68	24.46	278
4	98	35.25	125	44.96	5	1.79	29	10.43	21	7.55	278

Source: Fieldwork, 2019

From the above table, 1 represents that SMEs used to create their product by adding values, 2 represents that SMEs created value of the product, 3 represents that SMEs assumed greater level of risk in business and 4 SMEs finance productivity new business opportunities in North Central, Nigeria.

Table 4.4 Mean of Entrepreneurship Development

Variables	5	4	3	2	1	FX	N	Mean	X-X	(X-X) ²	Sectorial Mean	Sectorial SD
1	110	99	2	17	50	278	1036	3.72	0.01	0.0001		
2	111	101	3	17	46	278	1048	3.76	0.05	0.0025		
3	107	74	10	19	68	278	967	3.47	-	0.0576	3.71	0.0926
									0.24			
4	98	125	5	29	21	278	1084	3.89	0.18	0.0324		

Author's Computation

The table above also explains the acceptability of the variables used in the analysis: SMEs used to create their product by adding values, SMEs created value of the product, SMEs assumed greater level of risk in business and SMEs finance productivity new business opportunities in North Central, Nigeria and the analysis confirmed this, implying that at a mean value of 3.55 and a standard deviation of 0.011 signify that entrepreneurship development is unique since the sectorial mean is more than average and also all the mean are within the acceptable level.

Table 4.5: Regression Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.216661	0.011393	0.849288	0.0000
ED	0.314238	0.314259	1.311290	0.0000
R-squared	0.774831	Mean dependent var		1.189655
Adjusted R-squared	0.674611	S.D. dependent var		1.224519
S.E. of regression	0.212915	Akaike info criterion		0.119214
Sum squared resid	10.29858	Schwarz criterion		0.163492
Log likelihood	0.656790	Hannan-Quinn criter.		0.036842
F-statistic	1241.155	Durbin-Watson stat		1.311372
Prob(F-statistic)	0.000000			

Decision Rule 5% level of significance ; Source: Data output using E-view, 2019

From the regression result, entrepreneurship development coefficient is positive and significant in achieving improved productive input in North Central, Nigeria. The p-value of 0.00 is less than the t-statistic value of 1.31 and the standard error value of 0.31 is less than the t-statistic value. This implies that there is a significant relationship between improve productive input of industrialization and entrepreneurship development in North Central, Nigeria.

From the analysis, the study found that there is significant relationship between industrialization in the form of improved productive input and entrepreneurship development using SMEs in North Central Zone, Nigeria. This implies that industrialization in the form of improved productive input contributed significantly to entrepreneurship development in North Central Nigeria among SMEs owners. The study is in line with the study of Jackin (2004) who found that industrialization significantly led to entrepreneurship development. The study is also in tandem with simple industrialization theory which states that output is produced both by skilled and unskilled labour. And industrialization is a sure ground for economic growth that ensure entrepreneurship development in making them to produced productive with new features and quality.

5. Conclusions and Recommendations

The study concludes that there is significant relationship between industrialization in the form of improved productive input and entrepreneurship development using SMEs in North Central Zone, Nigeria. This implies that industrialization in the form of improved productive input has contributed significantly to entrepreneurship development in North Central Nigeria among SMEs owners. The study recommends that North Central, Nigerians should begin to embrace industrialization and the practices of industrialization should be properly encouraged to ensure entrepreneurship development. Government should ensure that every member of the society is productive by providing them with productive inputs as well as encourage domestic consumptions and use of made-in-Nigeria goods.

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Child Labour Hour and Household Expenditure on Child's Health: Case Study of Lapai Local Government Area of Niger State

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Abstract

This study investigates the contribution of household head's expenditure on child health in rural areas of Lapai, Niger State. The study used primary data with 382 observations and applied a logit and Two-Stages-Least-Square. The study reveals that a child's household head expenditure, nature of work and child's labour hours positively predict child health status, while educational level of household head negatively predicts child health status. The study therefore recommends active legislation and granting of adequate autonomies to monitoring agencies and authorities in order to reduce involvement of children in labour.

Keywords: Child, Labour, Expenditure, Health, Lapai

JEL Classification: D10, J23

1. Introduction

In Nigeria, children below the age of 17 usually participate in both domestic and economic work within and outside the family with the aim of earning income at the detriment of schooling. Children are exposed to long hours of work couple with too many responsibilities with little reward. These children are exposed to health hazards which lead to ill health or severe damage, especially those engaged in agricultural, manufacturing and mining sectors. With almost 250 million children across the globe, about 179 million are engaged in the worst form of child labour (WHO, 2018). Nigeria in particular represents around 6.1% (15million), with 50% of children participating fully in child labour, where North-Central with 56.8% having the highest against other regions (Kingston, 2018). Evidence by Agbo (2017) showed that 25% of child labourers do experience severe injuries mostly from all body pains in Nigeria.

In an effort to provide a legal framework for protection and welfare of children in Nigeria, the National Assembly in 2003 enacted The Child's Right Act (CRA, 2003). The Act made

lucid provisions for protection and welfare of a child. The first part guarantees and places the interest of the child to be of paramount consideration in all situations such that all actions undertaken by an individual or institution be it public or private must give priority attention to the interest of the child (CRA, 2003). This is not unconnected with the growing menace of child labour and other social vices confronting the child. He is often regarded as endangered species because his life is threatened (Iweala, 2005).

While attaching prominence to interest of the child, the law provides for the rights and duties of the child's parents, legal guardians, or other individuals, institutions, services, agencies, organisations or bodies legally responsible for the child (CRA, 2003). These are rights that are considered sacrosanct and have their foundation rooted in the United Nations Universal Declaration of Human Rights (UDHR)¹, The African Charter on Human and People Right (ACHPR)² as well as the Constitution of Federal Republic of Nigeria as amended.³

A very significant aspect of section 14 of the Child's Right Act is the right to parental care and protection which is specifically placed on the parents or guardian (CRA, 2003). As an inalienable right, the child is entitled to feeding, shelter, clothing, medical attention and other auxiliary services from the parents or guardian in accordance with their financial capability. It is not their duty to ask the child to do or provide for himself and the family any of such duties. Where there is a failure on the part of the parents or guardians the Child has a right of legal redress against them in a family court.

The Section 20 of the Act also places on the parents and guardians, institution, person and authority responsible for the care, maintenance, upbringing, education, training, socialization, employment and rehabilitation of a child the duty to provide necessary guidance, discipline, education and training for the child as will prepare him to be assimilated and appreciated in the society (CRA, 2003).

On the issue of Child labour, the Act is not oblivious of the physical and exploitative abuse our children are subjected to. It specifically prohibits exploitative labour.⁴ A child shall not be subjected to any form of forced or exploitative labour, or be required to lift, carry or move any object or material that can affect physical or mental being, or be employed as domestic servant outside his home, or employed to carryout work in any capacity but can be

¹The UDHR was ratified in 1948 after the second World War. Drafted by representatives with different legal and cultural backgrounds from all regions of the world.

² The ACHPR is an international human rights instrument that is intended to promote and protect human right and basic freedoms in the African continent. It came into force on 21st Oct 1986.

³ Chapter IV of the 1999 Constitution of the Federal Republic of Nigeria (as amended). Section 4(2) grants powers to the National Assembly to make law and pursuant of which the Child Right Act was enacted.

⁴ Section 28 Child Right Act 2003.

engaged on light work of agriculture, horticultural or domestic nature. Any contravention to this provision is meted with grave penal consequences.

The expenses on child labour injuries are mostly incurred by their parents with majority of parents relying on self-medication at homes, therefore demonstrating deficient treatment of the ailments. Given a worst situation of child injury, parents end up spending more than what the child has contributed to household fold. Earlier in 2016, Nigerian government launched the National Social Protection Programme with the sole aim of providing financial assistance to poor family with enlistment in school as a prerequisite.

Earlier studies have emphasized on various child labour consequences, with majority of them focusing on educational attainment of a child. Alfa Garba, Abdullahi and AbdulRahim, (2012) investigated the impact of child labour on school attendance in Nigeria, Allais and Hagemann (2008) examined the negative effect of child labour on Education-For-All (EFA) in 34 countries. However, Krutikova (2009) focused on household composition, income shocks and parental preferences as key determinants of child labour. Beegle, Dehejia and Gatti (2009) emphasized on the consequences of child labour on socio-economic factors notably education, health and wages. Other studies like Duflo (2000) only emphasized on child health, and the study aimed at investigating the effect of old age pension programme on child health in South Africa; while Page, Schaller and Simon (2017) looked at child health but in respect to aggregate labour demand shocks. Only a few studies recognized the role of household head; for example Alfa and Karim (2016) concentrated on child labour hours and their relationship with household head. Despite these, the studies did not look at household expenditure on child health. Does that mean children who engage in labour are not prone to illness? If they do, then who bear the burden of the illness especially when it involves huge resources? Therefore, this study investigates the contribution of household expenditure on child health.

2. Literature Review

Child labour has continued to be trading phenomena among various households both in rural and urban areas. Many societies have flouted global laws and national enactment of ILO (2000) with persistent increase in child labour, despite the labour carried out are at the detriment and danger of the children. This labour denies children of their early days, their prospects and their dignity, and that is hazardous to their substantial and psychological development (Shelburne, 2001). Although parents allow their children to participate in labour especially when the family can't generally meet its subsistence needs (Basu & Van, 1998). Despite all this, little has been known on how labour market affects children's health (Page et al, 2019). The role of household expenditure on child health is absent in many empirical studies on child labour.

Considering the empirical studies on child labour and child health; Nelson and Quiton (2018) used the logistic model to examine the effect of work on child health and recreation activities in Philippines, and found various risks to affect working children's health. Karimli, Rost and Ismayilova (2018) applied the mixed-effect model to test the relationship between types of hazardous work and child health outcomes in Burkina Faso, and the result showed a significant relationship between child health and hazards children are exposed to. Another study by Ibrahim, Abdalla, Jafer, Abdelgadir and Vries (2018) concentrated on

child labour and child physical and mental health in low-and-middle-income countries. They found children engaging in child labour to be experiencing malnutrition. Similarly, Beegle et al (2004) emphasized on child labour and health consequences in Vietnam where the instrumental variable was used and the result showed no significant effect between child labour and child health, because those ill among them did not significantly increase in child labour participation. However, looking at the objective of this study, a closer study to it is Duflo (2000). The study used the nonparametric regression to investigate household resources of aged pensioners and child health in South Africa, and found money given to old-age parents became of critical importance to them than child health. Reinhold and Jorges (2012) further concentrated on parental income and child health; the ordered probit result indicated that children from high income home do cope even when they are in chronic conditions. But other characteristics were emphasized by other scholars. Reichman, Corman and Noonan (2018) looked into relationship between status of parents and child health, and their findings revealed that poor health of a child reduces low income parents commitment to a stronger relationship. Finally, Lindeboom, Llena-Nozal and Klaauw (2009) investigated parental education on child health, and their OLS results showed that no effect of parent education on child health.

3. Methodology

In assessing the contribution of household expenditure on child health of those that engage in labour, this study used a cross sectional data set generated through the use of questionnaires that were obtained from urban and rural areas of Lapai and its environs (Reinhold & Jorges 2012; Alfa *et al.*, 2012). A total of 382 samples were obtained from a population of 130,000 households in the Local Government Area, using Saunder et al (2007) sample size calculation. The purposive sampling was used to obtain information from children aged 10 to 14 years who engaged in child labour. Child health status is used as a dependent variable, with a binary outcome of one if the child has been sick within the period of engaging in labour and zero for otherwise. The independent variables consist of nature of work measured by one if hazardous and zero otherwise, household expenditure measured by monetary expenditure on child health, child labour hours measured by average hours a child work per day; parent educational level measured by number of years schooling. This study used a logistic regression as seen in the study of Nelson and Quiton (2018) given the nature of the dependent variable to be categorical in nature. The model is specified as

$$P_r (C_i = 1/0)_i = \alpha + \beta_1NWk_i + \beta_2HExp_i + \beta_3Chdlb_i + \beta_4PEdu_i + \mu_i \dots\dots\dots 1$$

Where: $P_r (C_i = 1/0)$ is Probability of child been sick before; i is individual response, α is the constant parameter of the equation; β_s refers to the coefficient of the independent variables; with NWk as nature of child work; HExp as household expenditure on child health; Chdlb as child Labour; PEd as parent education and μ denotes error term.. Model two consists of child and household characteristics to see whether the variables contribute to child health status, which is specified below:

$$P_r (C_i = 1/0)_i = \alpha + \beta_1NWk_i + \beta_2HExp_i + \beta_3Chdlb_i + \beta_4PEdu_i + \beta_5Ocup_i + \beta_6AgCh_i + \beta_7GnCh_i + \beta_8HAg_i + \beta_9HGnd_i + \beta_{10}FlySz_i + \mu_i \dots\dots\dots 2$$

Where: P_r ($C_i = 1/0$) is Probability of child been sick before; i is individual response, α is the constant parameter of the equation; β_s refers to the coefficient of the independent variables; with NWk as nature of child work; HExp as household expenditure on child health; Chdlb as child Labour; PEd as parent education; HhW is household welfare; AgCh as age of a child; GnCh represent gender of a child; HAg indicates household head age; HGnd denotes household head gender; FlyS is family size; and μ denotes error term. This study also used Two-Stages Least Square (2SLS) to stay clear of endogeneity, with household expenditure on health (HExp) as dependent variable, while child health status, parent education and occupation as independent variables, where child health status is instrumented by nature of child work (NWk) and child labour hours (Chdlb), which is presented in model 3 and 4.

$$HExp_i = \beta_1 ChHlt_i + \beta_2 PEdu_i + \beta_3 Ocup_i + \mu_i \dots\dots\dots 3$$

$$ChHlt_i = \beta_1 NWk_i + \beta_2 Chdlb_i + v_i \dots\dots\dots 4$$

4. Result Analysis

Table 4.1: Descriptive Statistics

Variable	Mean	Standard Deviation
Child Health Status	0.78	0.41
Household Expenditure on Health	498.61	142.21
Child Labour Hours	3.42	1.51
Nature of Work	0.66	0.48
Age of Child	11.89	1.36
Gender of Child	0.59	0.49
Household Head Age	47.00	10.61
Household Head Gender	0.19	0.39
Education of Household Head	0.60	0.49
Occupation of Household Head	0.23	0.42
Family size	10.14	3.69

Source: Authors Computation

The result in Table 4.1 entails the descriptive result of the variables used in this study. child health status has a mean value of 0.78 signifying majority of children that engaged in child labour might have one element of sickness or the other, either having physical or mental disability. The average expenses of household on child health was 498.61 with a deviation of 142.21, indicating households do spend a reasonable amount of money to treat a child that was unhealthy, which might even affect the gains from labour. For child labour hours, the average hour children spent on work was 3.42 hours with standard deviation of 1.51, with majority of them working under hazard condition given the mean to be 0.66 and difference from the mean to be 0.48. This shows that majority of children purposively sampled worked on 3 hours and above per day under hazardous conditions. Child age also have a mean value of 11.89 with a difference of 1.36 from the mean, and gender having the mean of 0.59 with standard deviation value of 0.49. This means all children are within the international definition of a child, with the majority of children sampled to be male.

For the household characteristics, the average age of the head was 47 with standard deviation of 10.61, and gender of household to have a mean value of 0.19 with deviation

value of 0.39. This suggests that majority of the household heads were in their 40s with female heads as the majority. In terms of educational level, majority of them had attained formal education with majority having either primary or secondary certificate. Majority of the household heads were employed in the informal sector given the average value to be 0.23 and standard deviation of 0.42, which signifies their greater participation in agricultural production. Also of the sample obtained from the population, the average family size was 10.14 and measure of dispersion of 3.69, which indicates that majority of the household heads, had large families.

Table 4.2: Logit Result with Child Health Status as Dependent Variable

Variables	1		2	
	Logit	Margins	Logit	Margins
Household Expenditure	0.0205*** (0.0027)	0.0007	0.0271*** (0.0043)	0.0002
Nature of work	1.5975*** (0.4971)	0.0716	1.1473* (0.6029)	0.0106
Child Labour Hours	0.9680*** (0.1768)	0.0319	1.4203*** (0.2812)	0.0104
Education of Head	-1.7542*** (0.5717)	-0.0541	-2.1576*** (0.7663)	-0.0152
Occupation of Head			1.9118** (0.8275)	0.0098
Age of a Child			0.1280 (0.2221)	0.0009
Gender of a Child			-0.2969 (0.6289)	-0.0021
Household Age			0.0590* (0.0327)	0.0004
Household Gender			-2.3098*** (0.7342)	-0.0417
Family Size			0.4273*** (0.1224)	0.0031

Notes: Robust standard errors are in parentheses, P values: significance *10%; **5%; ***1%.

Table 4.2 shows a logit result with child health status as dependent variable. Model 1 has factors that directly worsen child's health, while model 2 is combined with other child and household characteristics. From the result, household expenditure coefficient is positive and significant at 1% in the two models; it indicates that expenditure by household leads to expenditure on child health by 0.07% in the model and 0.02% in the second model. Despite child labour benefit to some households, they still spend some portion of their personal income on child health. The nature of work by child also affects their health status; the coefficient is positive and significant at 1% in the first model and significant at 10% in the second model. It shows that the more a child works in hazardous condition, the more likely the child will be ill. The probability of child working in hazardous condition worsens child health by 7.16% and 1.06% respectively. By this nature, children are found in various forms

of trade which affects their physical and mental ability. Similarly, child labour hours positively affect child health and significant at 1% in the two model as obtained by Nelson and Quito (2018). It means an increase in the hour of labour affects child physical and mental ability by 3.19% and 1.04% respectively, that is the more a child engage in work, the more tendencies that the work will be injurious either physically or mentally. However, educational attainment of household head is negative and significant at 1% in the two models, signifying that the more educated households were, child health complication from work reduces by 5.41% and 1.52% respectively. But occupation in the second model is positive and significant at 5%, these shows that being an unskilled work increases child exposure to hazardous condition of work, because majority of children equally assist their parents or guardian in work. This is in line with the study of Reichman, *et al.* (2018)

Looking at child characteristics in term of age and gender, the result obtained shows that the two variables are not significant to child health status. This means age and being male or female child does not count in terms of child health status. But for the household characteristics, age of the household head is significant at 10%, while gender of household head is negative and significant at 1%. This indicates that, the older the household becomes, the more a child engage in injurious work, because household head contribution to house income will be diminishing and children may decided to spend additional hours on work. Also, being a female head increases child involvement in hazardous work that might affect their physical and mental health. On the other hand, the coefficient for family size is positive and significant at 1%, it shows that the larger the family sizes the more a child experience health challenges most especially if engaged in work.

Table 4.3: Regression Result with Household Expenditure as Dependent Variable

Variables	3 OLS	4 2SLS	5 2SLS (Robust)
Child Health Status	227.1843*** (11.6858)	156.6914*** (26.8799)	160.9167*** (26.9912)
Education of Head	7.5783 (11.6244)	-9.9361 (13.4990)	3.8118 (12.6462)
Occupation of Head	39.0934*** (13.7650)	52.6618*** (14.5352)	

Notes: Robust standard errors are in parentheses, P values: significance *10%; **5%; ***1%.; Instrumented: Child health; instruments: nature of work, child labour hours

The two stage least square (2SLS) was used in order to stay clear of endogeneity problem, and presented in Table 3 with nature of work and child labour hours being instrumented by child health status. The result shows that child health is positively related to household expenditure and significant at 1% in all in the three models even after instrumentation in model 4 and 5. This shows that households do spend more on child health particularly those who engage in labour; because household expenditure on medicines is always elastic, and it does follow the level of an individual income. The educational level of the head is not significant in the entire model, indicating household head educational level does not count on household head expenditure. The fact still remains that household heads do spend money

once it comes to domestic affairs. But nature of occupation is positively and significantly related to household expenditure that a head who works in informal sector increases household expenditure by 39 and 53 units in model 3 and model 4 respectively. This finding is not in conformity with the findings of Lindeboom *et al.* (2009) as household heads in informal sector have a large participation of their children engaged in child labour, which eventually make them to spend more once it comes to the issue of child health and other child related factors.

5. Conclusion and Recommendation

In investigating the contribution of household expenditure on child health, this study found household head expenditure, nature of work and child labour hours do positively predict child health status, while educational level of head negatively predicts child health status. However, child health status and occupation of head are positive and significantly influence household head expenditure. The study therefore recommends use of active legislation and programme for eradicating children involvement in labour, with granting of adequate autonomies to monitoring agencies and authorities. Because their involvement in labour exposes them to more hazardous condition, which eventually makes household heads to spend more of their income on child health.

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Banking Sector Integration and Economic Growth: Re-examination of the Impact of Financial Integration on Growth

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Abstract

Despite the supposed importance of international financial integration, scholars are divided as to the impact of financial integration on economic growth, with no clear consensus. This study investigates the impact of banking sector integration on economic growth in a panel of 108 developed and developing countries. Using annual data from 2000-2015 and employing the panel quantile regression method, the results show that the banking sector integration on economic growth varies across income level. Banking sector integration is reported to have affected growth positively at very low income level but it has negative impact for middle income level. Banking integration has no impact on growth at upper low income and high income levels.

Keywords: Banking Sector Integration, Economic Growth, Quantile Regression

JEL Classification: C23; E44; F33; F43; G21; O57

1. Introduction

Global report on cross border hotel investment by JLL (2015) reveals that the Australian region relies most on off-shore banks for total investment (accounting for 57 per cents of total investment in global hotels in the economy). Latin American is said to be the most regional financially integrated region, with 40 per cents of its total investment funds sourced within the region and 26 per cents from off-shore banks. Africa relies completely on off-shore funding for such investment. North America is the least integrated region, funding 75 percentage of such investment domestically, only 1 per cent is raised within the region, 12 per cents from off-shore, and 12 per cents from other part of the world. For Europe, 16, 36

and 10 per cents are from intra-regional, off-shore banks, and global sources respectively. 50 per cent of investments in the Middle East are funded domestically. The balance is augmented from funds within the region (26 per cents) and off-shore equity firms and investment banks (24 per cents). Asia rely greatly from domestic sources (76 per cents) and from other countries within the region (22 per cents). Only 2 per cents are raised from off-shore banks sources.

The last few decades recorded significant improvement in the degree of financial integration. Thus, the importance of banking sector integration cannot be overlooked, as it provides important means through which the economy is finance especially in the case for developing countries (Illut and Chirlesan, 2012). It is argued that financial integration promotes growth through financial sector efficiency, capital redistribution, adoption of global best practices among other good benefits (Chakraborty, Hai, Holter and Stepanchuk, (2016); Vo and Daly, 2007; Schmukler, 2004). In the case for banking integration, it may affect growth through two channels; the first by capital expertise and new technologies available for growth and the second channel is through risk sharing and diversification.

In spite of supposed positive impact of financial integration on growth, contention still exist as to the impact of financial integration and economic growth as some scholars have argued that financial integration leads to financial and economic volatility (Gourinchas and Jeanne, 2013; Biekpe and Motelle, 2013; Villareal and Bielma, 2017). Thus, scholars are divided by the impact of financial integration on growth. It has been argued that banking integration assist in spreading financial shock/crisis through contagiousness as evidence during global financial meltdown of 2008 (Global Financial Development report, 2017/2018).

One of the reasons for variance in findings among scholars is that the impact of financial integration may in fact be heterogeneous and varies among countries based on income level. Most past studies assumed homogeneous impact of financial integration on growth, even within heterogeneous samples. However, Ibrahim (2016) have shown that the impact of financial integration is heterogeneous and varies across income levels. Again, some of the past studies were focused on the degree of banking sector integration (Illut and Chirlesan, 2012). Thus, it is pertinent to investigate the heterogeneous impact of financial integration across the entire data spectrum and not to rely on the mean estimate as used in most past studies. This study will investigate the impact of banking sector integration on economic growth.

The rest of the work is organized as follows; Section 2 briefly discusses literature review. Section 3 presents methodology and data. Section 4 discusses results. Section 5 summarizes the findings.

2. Literature Review

The debate on the impact of financial integration on growth is without consensus among scholars. Some scholars argue that financial integration ensures that needed capital is readily available, promotes efficiency and leads to specialization in the banking sector, thereby promoting economic growth (Gehring, 2013; Maudos and Fernandez De Guevara, 2015; Nicolo and Juvenal, 2014; Chakraborty et al; 2016; Hooy and Lim, 2013).

Other scholars argue that capital inflows and outflows occasioned by financial integration, especially in economies not well developed to accommodate such capital flows may leads to exchange rate and macroeconomic shocks and therefore promote economic and financial instability (Motelle and Biekpe, 2015; Van-Ewilck and Arnold, 2015; Calliature, Ghironi, and Lee, 2016). Also, it spreads and amplifies the impact of financial shock across countries as in the case of global economic and financial crisis of 2008 (Fecht, Gruner, and Hartmann, 2012; Neaime, 2016; Paramati, Roca, and Gupta, 2016; Pyun and An, 2016; Milcheva and Zhu, 2015, Lehkonen, 2015).

Other scholars have focused on the determinants of financial integration. Factors such as trade openness, economic growth, economic/financial/political crises, institutions, and membership to regional economic bloc have been reported to be important determinants of financial integration (Alotaibi and Mishra, 2016; Perego and Vermeulem, 2016; Guesmi, Teulon, and Muzaffar, 2014; Bekaert et al; 2013).

3. Methodology

This study utilized the quantile regression method to estimate the impact of banking sector integration on economic growth. The standard panel OLS/mean estimators model the relationship between the explanatory variables on the conditional mean of the dependent variable. These estimators fail to take into account the problem of heterogeneity and simply assume that impact to be static across the entire data spectrum. This may however be incorrect especially with heterogeneous sample where the impact varies across data spectrum (Ibrahim et al; 2016). Unlike the mean estimators, the quantile regression as proposed by koenker and Bassett (1978) models the relationship between the explanatory variables on the conditional mean of the dependent variable. Quantile regression model seeks to minimize the absolute sum of error, $(\min \sum |y_i - \beta x_{is}|)$ but penalizes for over and under-predictions.

Koenker and Bassett (1978) have assigned asymmetric penalties for the *quantiles* in order to optimize the *Least Absolute Deviation* as below;

$$\min \sum_{i=y_i \geq \alpha_q + \beta q x_s} q |y_i - (\alpha + \beta i X_s)| + \sum_{i=y_i < \alpha_q + \beta q x_s} (1 - q) |y_i - (\alpha + \beta X_s)|; \dots\dots 1$$

$$\text{where, } \begin{cases} q \varepsilon_{qi} \text{ if } \varepsilon_{qi} \geq 0 & \text{under prediction} \\ (1 - q) \varepsilon_{qi} \text{ if } \varepsilon_{qi} < 0 & \text{over prediction} \end{cases}$$

This equation serves as a check function in the *quantile regression* model which allows for the estimation of the *conditional linear quantile regression* function defined below;

$$q(y_i | x_s) = \alpha_{qi} + \beta_{qi} x_{is} + \varepsilon_{qi}; \dots\dots\dots 2$$

where $q(y_i | x_s)$ denotes conditional quantile representation, α_q is the intercept at the q^{th} quantile, β_{qi} is the slope coefficient at the q^{th} quantile, ε_{qi} is the error term at the q^{th} , y_i and x_s are the dependent and vector of explanatory variables respectively. As in the case of *standard OLS*, the β_{qi} measures the marginal effect of the X_s at the corresponding q^{th} so that

$$\frac{\partial q(y_i|x_i)}{\partial x_i} = \beta_{qi} \dots\dots\dots 3$$

Some of the strength of the quantile regression method over other mean estimators are; it is most suited for heterogeneous sample and non-normal data as in our case. Also, it is not affected by extreme values/outliers as the parameter estimates apply to specific quantile of the dependent variable. Again, it provides better characterization of the entire data spectrum.

To measure the impact of banking sector integration on economic growth, we present a linear quantile panel model as thus below;

$$y_{qit} = \alpha_{qit} + \beta bi_{qit} + \theta \text{ control variables}_{qit} + \varepsilon_{qit}; \dots\dots\dots 4$$

Where β , and θ are coefficients or parameter estimates of financial integration and other control variables our model. α is the intercept of the model and ε is the error term. The subscript q denotes specific quantile while the subscript it imply panel. The control variables include investment, inflation, trade, government expenditure, population, and institutional factors. Therefore, inserting these variables into the model we have;

$$y_{qit} = \beta_0 y_{qit} + \beta_1 bi_{qit} + \beta_2 k_{qit} + \beta_3 inf_{qit} + \beta_4 tr_{qit} + \beta_5 gov_{qit} + \beta_6 pop_{qit} + \varepsilon_{qit} \dots\dots\dots 5$$

Except for inflation and population growth rate, all other variables are transformed to log form.

Annual data from 1995-2013 for 105 developed and developing countries is used. Refer to appendix 1 for list of countries. The choice of sample and time dimension is subject to data availability. Real GDP per capita (ly) is used as proxy for economic growth as used by Sarafi (2016) Domestic investment (lk) is measured by gross fixed capital formation and has been utilized in studies by Ahmed (2016) the number of foreign banks (lnfb) is use to proxy banking sector integration. This measure has been used in studies by Consumer price index is used as measure of inflation (inf) similar to Ahmed and Mmolainyane (2014) government final consumption expenditures (lg) is used to represent public expenditure as used by Mmolainyane and Ahmed (2015) Trade ration (ltr) proxies trade openness and is the ratio of the sum of export and import to GDP. This variables has been used in previous studies by Ahmed (2016) finally, population growth rate (pop) is to measure the impact of population growth on economic growth and has been used in past empirical models by Chen and Quang (2014) Data on real GDP per capita, gross fixed capital formation, inflation, government expenditure, trade ratio, and population growth is collect from World Bank World Development Indicator database while data on the number of foreign banks are collected from World Bank Global Financial Development database.

4. Results

The result from Tables 4.1 and 4.2 below present the descriptive statistics and the correlation tables. Table 1 provides the general descriptive statistics and according to the quantiles (25th, 50th, 75th, an 90th). Table 4.3 presents the correlation matrix. From the correlation table, there is low and negative correlation between measure of banking sector integration and economic growth. Population growth is found to be negatively correlated

with growth. All other measures are found to have positive correlation with economic growth, although, weak in most cases.

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Ly	1974	8.60	1.53	5.13	11.62
Lk	1971	23.24	2.94	-4.07	28.81
Lnfb	1940	3.35	0.95	0	4.60
Inf	1974	1.18	1.20	-8.52	1.45
Lg	1974	23.15	2.05	18.39	28.55
Ltr	1974	4.29	0.54	2.69	6.09
Pop	1974	1.23	1.20	-3.82	7.91

Table 4.2: Quantile Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
<i>Ycat =1</i>					
Ly	494	6.58	0.52	5.13	7.45
Lk	494	21.72	1.61	18.76	27.21
Lnfb	488	3.39	0.89	1.09	4.60
Inf	494	25.08	223.02	-8.52	4145.10
Lg	494	21.25	1.35	18.50	26.01
Ltr	494	4.07	0.48	2.69	5.10
Pop	494	2.26	1.04	-2.04	7.91
<i>Ycat =2</i>					
Ly	493	8.05	0.29	7.45	8.57
Lk	493	22.70	1.37	20.21	26.40
Lnfb	490	3.50	0.73	1.09	4.510
Inf	493	15.61	63.32	-1.27	1058.37
Lg	493	22.36	1.24	18.39	25.10
Ltr	493	4.36	0.40	3.14	5.13
Pop	493	1.25	1.22	-2.17	5.36
<i>Ycat =3</i>					
Ly	494	9.16	0.36	8.58	9.97
Lk	494	23.99	1.43	21.10	26.97
Lnfb	486	3.59	0.62	1.60	4.47
Inf	494	9.44	15.39	-4.00	197.47
Lg	494	23.73	1.42	20.66	26.82
Ltr	494	4.32	0.52	2.74	5.39
Pop	494	0.60	0.99	-3.82	2.63
<i>Ycat =4</i>					
Ly	493	10.62	0.35	9.98	11.62
Lk	490	24.56	4.82	-4.07	28.81
Lnfb	476	2.91	1.28	0	4.56
Inf	493	4.72	2.37	-4.47	1.45
Lg	493	25.28	1.52	21.50	28.55
Ltr	493	4.40	0.66	2.81	6.09
Pop	493	0.82	0.763	-1.85	5.32

Table 4.3: Correlation Matrix

Variable	ly	Lk	lnfb	inf	lg	ltr	Pop
Ly	1.00						
Lk	0.36	1.00					
Lnfb	-0.17	-0.23	1.00				
Inf	0.16	-0.72	-0.02	1.00			
Lg	0.74	0.61	-0.36	0.08	1.00		
Ltr	0.23	-0.16	0.29	0.05	-0.19	1.00	
Pop	-0.49	-0.19	0.13	-0.03	-0.38	-0.13	1.00

Table 4.4 below presents the OLS and Quantile regression results. The result from OLS estimation show that gross fixed capital formation, inflation, and population growth are found to affect growth negatively. Banking sector integration is insignificant to economic, while public expenditures and trade are found to affect economic growth positively. The results from the Quantile estimations revealed that gross fixed capital formation, inflation, and population negatively affect growth except at 90th quantile. Again, the coefficients of the quantile estimates between 25th-75th quantiles are not significantly different from the OLS estimates (for gross fixed capital formation and inflation). With respect to population growth, the quantile estimates (25th to 75th) are statistically different from the OLS estimate. This implies that the negative impact of population growth on economic growth is larger among low and middle income countries.

The results of the quantile estimations show that public expenditures and trade have positive impact on economic growth. With respect to public expenditures, it is found that except for high income countries, the coefficient is not statistically different with the OLS estimate. For high income countries, the impact of public expenditure on growth is less relative to the low and middle income countries. The quantile results for trade revealed that has greater positive impact for upper middle and high income countries relative to the middle and low income countries. The quantiles estimates for the 75th and 90th quantiles are statistically different to the OLS estimate.

Estimates from the quantile regressions show that banking sector integration is has no impact on economic growth for low and high income countries. On the contrary, the results show that banking sector integration has negative impact on growth for middle income countries. The quantile plot (Figure 2) provides rather a more detailed impact of banking integration on growth, from the quantile plot, it is evident that banking integration has significantly positive impact on economic growth at a very low income level (below 20th quantile). At this income level, the quantile estimate and confidence interval are positive and statistically different from zero.

The results reveal important information with policy implication. The result from table 3 show that the impact of financial integration is not homogenous across the entire sample. Rather, it varies based on income level. Countries differs owing to certain inherent characteristics. To assume that the impact of integration is same for all sample is in fact wrong and misleading. The BP/CW test shows that the sample variance is heterogeneous. Banking sector integration is beneficial for low income countries, especially very low

income countries. Middle income countries are negatively impact while integration has no impact on growth among high income/very high income.

Table 4.4: Least Square and Quantile Regression Results

Ly	OLS Regression	Quantile Regression (25 th)	Quantile Regression (50 th)	Quantile Regression (75 th)	Quantile Regression (90 th)
Lk	-0.253*** (0.03)	-0.35*** (0.06)	-0.23*** (0.03)	-0.24*** (0.02)	0.07 (.092)
Lnfb	0.01 (0.02)	0.04 (0.02)	-.075***+ (0.02)	-0.078***+ (0.01)	-0.020 (0.04)
Inf	-4.33*** (7.29)	-6.35*** (1.19)	-4.71*** (7.16)	-4.11*** (5.28)	1.17 (2.10)
Lg	0.80*** (0.03)	0.90*** (0.05)	0.77*** (0.03)	0.78*** (0.02)	0.62***+ (0.09)
Ltr	1.024***+ (0.03)	0.91*** (0.047)	0.99*** (0.03)	1.13***+ (0.02)	1.17***+ (0.06)
Pop	-.175*** (0.01)	-0.19***+ (0.02)	-0.217***+ (0.01)	-0.219***+ (0.01)	-0.12*** (0.02)
Cons	-8.351*** (0.32)	-8.393***+ (0.434)	-7.595***+ (0.318)	-7.736***+ (0.24)	-11.31***+ (0.58)
Adj-R ² /Pseudo- R ²	0.740	0.499	0.531	0.532	0.433
BP/CW test			73.30 [0.0000]		
N			105		

Figure 1: Quantile plot of the dependent variable

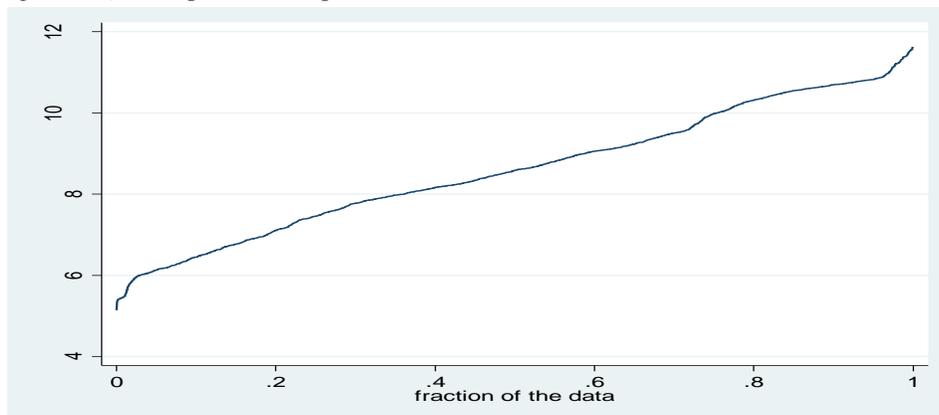
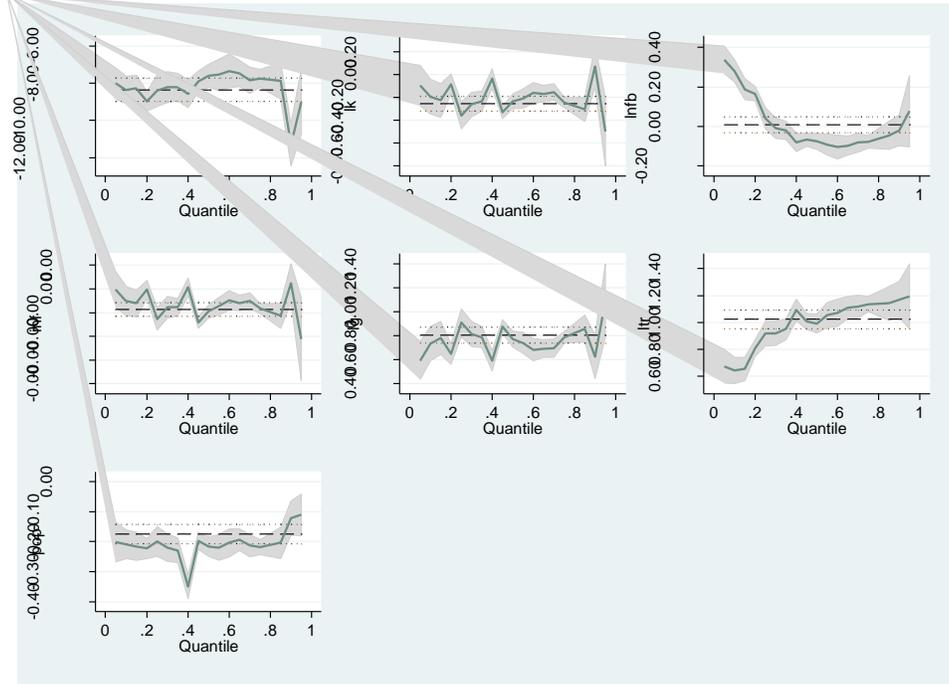


Figure 2: Quantile plot of the parameter estimates



5. Summary

The debate on the impact of financial sector integration is contentious. Although the world has witnessed significant increase in the degree of financial integration and capital flow between and among countries/regions, yet its impact on growth is mixed; thus calling for caution among policy makers. This paper argues that the impact of banking sector integration varies across income level. Using annual data from 2000-2015 in a panel of 105 countries and by means of the panel quantile regression, the results show that banking sector integration positively impact on growth among very low income countries but is insignificant among the upper low income and high income countries. On the contrary, the results reveal that banking sector integration affects growth negatively among middle income and upper middle income countries. The study recommends however for further development of the study so that: number of countries should be added and the annual data should go beyond 2015.

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Appendix 1: list of countries

Albania, Algeria, Angola, Argentina, Armenia, Australia, Austria, Azerbaijan, Bangladesh, Belarus, Belgium, Benin, Bolivia, Botswana, Brazil, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Canada, Chile, Colombia, Congo Rep., Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Dominican Republic, Ecuador, Egypt Arab Rep., El Salvador, Estonia, Finland, France, Germany, Greece, Guatemala, Honduras, Hong Kong, Hungary, India, Indonesia, Ireland, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, Korea Rep., Kyrgyz Republic, Latvia, Lithuania, Luxembourg, Macedonia FYR, Madagascar, Malaysia, Mali, Mauritania, Mauritius, Mexico, Moldova, Morocco, Mozambique, Namibia, Nepal, Netherlands, Nigeria, Norway, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Russian Federation, Rwanda, Senegal, Serbia, Singapore, Slovak Republic, Slovenia, South Africa, Spain, Sudan, Swaziland, Sweden, Switzerland, Tanzania, Thailand, Togo, Tunisia, Turkey, Uganda, Ukraine, United Kingdom, United States, Uruguay, Venezuela RB., Vietnam.

Impact of Public Capital Expenditure on Economic Growth in Nigeria

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Abstract

This study investigates the impacts of capital expenditure on the rate of growth of the Nigerian economy during the period 1981 to 2017 using the Engel-Granger 2-step error correction technique. The study reveals that there is a negative influence of capital spending on economic growth due to shortfall between funds disbursement and utilization. It was further discovered from the study that exchange rate and inflation rates have positive and negative relationships with economic growth respectively. More so, there appears to be cointegration between the variables and an error correction of 28.5 percent was found in the event of any disturbance in the short-term equilibrium. The study suggests that proper machinery be put in place in order to checkmate the spending and implementation of projects for which government funds are intended and a favourable flexible exchange regime which will be properly tailored to the requirements of the Nigerian economy be adopted.

Keywords: Capital Expenditure, Economic Growth, Public Finance, Error-correction, Nigeria,

JEL Classification: E62, E63

1. Introduction

The need to improve the living condition of people of every nation is a key priority of every government. This can be achieved through increase in government expenditure from the capital angle. This enables the government to have at its disposal enough fund to finance its capital expenditures, which will be accompanied by increase in economic output of the nation.

Government expenditure is identified by economists as a way of contracting or expanding a nation's economy. Increased government spending will in turn expand the economy through increased economic activities while lowering government spending contracts the economy

through reducing inflationary gap which as well is capable of reducing economic activities or output (Rosoui, 2015).

In recent years, the Nigerian government has engaged in more expenditure in order to stimulate growth of the economy. Government expenditure is divided into two namely; Recurrent expenditure and Capital expenditure. Recurrent expenditure deals with overhead or running cost of government such as payment of salaries, pension and so on while capital expenditure deals with accruing physical or tangible goods such as building infrastructures, accruing machines and so on (Darma, 2014). Although, research evidence shows that even with rapid increase in both capital and recurrent expenditures, the economy has remained stagnant or moved in a sluggish manner (Modebe, Okafor, Omoumere & Ibe, 2012).

Wagner (1883) posited in his theory of public expenditure that government spending results to economic growth while Keynes (1936) also posits that growth cannot occur without government expenditure. Smith (1776) in his *Wealth of Nations* argues that government should focus on critical sectors of the economy such as defense, health and public (infrastructural) development, expenses made to other sectors aside from those he pointed out were regarded as a wastage. In recent times, the Nigerian government has invested tremendous amount in capital expenditure due to infrastructural deficiency as identified by policy makers as one of the reasons why the nation's economy has not received massive investments from investors both within and outside the country.

Barro (1990) endogenized state spending in a growth model and examined the relationship between the size of a government and rates of savings and economic growth. His submission was that increase in funds which are made to non-productive government services is related to low per capita growth and therefore concluded that for state expenditure to enhance growth, it has to tend towards productive services.

Over time, government capital expenditure has been unstable, rising and dropping. In 1894, the amount spent on capital projects was ₦4.10 billion while it increased to ₦24.05 billion in 1990. During this period, the highest level of economic growth was in 1990 when there was a growth of 12.8 percent. From 1991 till date, capital expenditure has been on a constant rise from ₦28.34 billion in 1991, ₦121.14 billion in 1995, ₦552.39 billion in 2006 and ₦1,152.80 billion in 2009 after which it became fairly unstable with rise and fall until 2017 when it was at ₦979.50 billion (CBN, 2017). However during this period, the increase in capital spending did not reflect much on the economy as even in 2009 when the highest amount was observed, there was only a growth rate of 6.9 percent in the economy.

Previous studies such as Nurudeen and Usman (2010); Modebe, Okafor, Onwumere, and Ibe (2012) among others examined the impacts of capital expenditure alongside recurrent expenditure thereby not really been able to separate the effects of both types of spending. This study however, examines the impacts that capital expenditure has on economic growth being independent of the influence of recurrent expenditure. This paper is organized in five sections. The first section is the introduction, section two reviews related literature; model and methodology are in section three, while sections four and five are discussion of results and conclusion and recommendation respectively.

2. Literature Review

A nation is said to experience economic progress when its annual output increases at a steady rate over years. Todaro (1994) cited Kuznet's (1955) definition of growth as "a sustained increase in a nation's gross national income-per capita over a long period of time ". Kuznet (1955) noted that a country is in a static state if the population of the country and its gross national product are growing proportionately. This means that if GNP grows faster than population, then the economy is experiencing economic growth. He therefore sees growth as quantitative increase in economy without considering its quality.

There have been numerous studies on the relationship between government expenditure and economic growth. For instance, Nkechukwu and Okoh (2013) examined the relationship between capital expenditure at disaggregated level on economic growth in Nigeria from 1981-2013. They employed ordinary least square to predict economic growth while cointegration and vector auto regression was adopted to analyze the long-run and short-run relationship between capital expenditure and economic growth. The findings of the study showed a positive long-run relationship between capital expenditure on education and road and economic growth as well as a negative long-run relationship between capital expenditure on health and agriculture on economic growth.

Komain and Brahasrene (2007) used the Granger causality test to examine the influences of government spending on economic growth in Thailand. The study revealed that state expenditures are not cointegrated with economic growth. A unidirectional causality was found to run from expenditure to economic growth and a significant positive relationship was found to have existed between government spending and economic growth. Study by Darma (2014) on federal capital expenditure and its impact on economic growth in Nigeria from 1980-2010, employed ordinary least square to ascertain the relationship between the two variables. The result of the study revealed that total capital expenditure, capital expenditure on administration, capital expenditure on social investment and capital expenditure on transfer impacted positively on economic growth in Nigeria.

Nurudeen and Usman (2010) studied the impacts of public spending on economic growth in Nigeria from 1970 to 2008 using the Engel-Granger ECM technique and found that total capital expenditure and inflation had negative relationship with economic growth. In the same vein, using the ordinary least square, Modebe, Okafor, Onwumere, and Ibe (2012) found a negative relationship between capital expenditure and economic growth while exchange rates and recurrent expenditure were found to have positive coefficients.

Ebong, Ogwumike, Udongaro and Ayodele (2016) conducted a research on the impact of government expenditure on economic growth using annual data from 1970-2012. The study employed the ordinary least square technique and the results showed that capital expenditure on agriculture had no significant influence on economic growth in both long-run and short-run while capital expenditure on education had a significant impact on economic growth. It was further revealed by the study that capital expenditure on health had a negative impact on economic growth and the relationship was in fact, insignificant. Lastly, capital expenditure on human capital through social services was observed to have promoted economic growth unlike that of agriculture.

In another study, Rosoui (2015) investigated the impact of current and capital expenditure on economic growth in Romania covering the period 1995 to 2013. The study adopted the vector autoregression model for data estimation. Findings of the study revealed a decreasing real gross domestic product as current expenditure increased while on the other hand, the study showed a positive and significant relationship between Real Gross Domestic Product and capital expenditure such that an increase in capital expenditure increases economic growth.

Aregbeyen (2007), in his study, found out a significant positive correlation between government capital expenditure, public investment and economic growth. The study further revealed that both consumption and recurrent expenditure had negative impact on economic growth. Laudau (1983) studied the effect of government (consumption) expenditure on economic growth for a sample of 96 countries. From his findings, it was revealed that government recurrent expenditure contributed negatively on economic growth while capital expenditure contributed positively on real output.

Oyeleke, Raheem and Falade (2016) examined the influence of disaggregated functional capital expenditure on economic growth in Nigeria between the periods of 1970-2013. The error correction model was employed to estimate data both on economic growth and capital expenditure. Findings of the study revealed that there was a long run relationship between the components of public expenditure and economic growth. The study further depicted that disaggregated functional capital expenditure of government did not generate the needed growth to real economic activities. However, the study showed that capital expenditure on economic services was negative and insignificantly related to economic growth and also that inflation rate had a positive coefficient.

3. Methodology

The data used in this study which is aimed at investigating the relationship between capital expenditure and economic growth from the period 1981-2017 are annual time series data. The model which was adopted from Nurudeen and Usman (2010) was tailored to suit the aim of this study which studies capital expenditure independent of recurrent expenditure, it is stated in its functional form as follows:

$$GDP = f(CEX, INF, EXR).....1$$

Where *GDP* is Gross Domestic Product growth rate, which is the dependent variable, *CEX* is Capital expenditure (in billions of Naira) which is the focal explanatory variable, *INF* is inflation rate and *EXR* is Official Naira to Dollar exchange rates. Inflation and exchange rates are control variables added for the purpose of getting an all-encompassing robust result. All data were gotten from the World Bank World Development Indicators (WDI) (2017) except for capital expenditure which was gotten from CBN annual statistical bulletin (2017). For empirical analysis, equation (1) is restated as thus:

$$GDP_t = \alpha_0 + \gamma_1 CEX_t + \gamma_2 INF_t + \gamma_3 EXR_t + \mu_t2$$

Where: α_0 is the intercept of the; $\gamma_1 - \gamma_3$ re the slopes of the expression; *t* shows the period of the observation and θ is the disturbance term. This having been stated, the stationarity test is conducted to ascertain the unit root properties of the data obtained. This serves as an

Table 4.2: Stationarity Test

Variables	ADF-Statistic	5% Critical Value	Order of Integration
<i>GDP</i>	-8.902391	-2.948404	I(1)
<i>CEX</i>	-7.621081	-2.948404	I(1)
<i>INF</i>	-5.514717	-2.948404	I(1)
<i>EXR</i>	-3.297372	-2.948404	I(1)

Source: Authors' computation using Eviews 7.

4.3 Cointegration Test

The Johansen system of cointegration was used for testing the existence of a long-run relationship between variables in this study. The null hypothesis of no cointegration was tested against its alternative. The null hypothesis was rejected if the Trace statistic or the Max-Eigen statistic (depending on the selected choice) was greater than the critical value at 1%, 5% or 10% level of significance.

Table 4.3: Cointegration Test

Hypothesized No. of CE	Trace Statistic	5% Critical Value	Probability
<i>None*</i>	48.24850	47.85613	0.0459

Source: Authors' computation using Eviews 7.

The Johansen cointegration test shows a Trace statistic of 48.24850 which is greater than the 5% critical value of 47.85613, which translates to one cointegrating equation in the relationship. Therefore, there exists a long-run relationship between the variables and hence, we can reject the null hypothesis of no cointegration. Having established a long-run relationship in the model, we go further to estimating the error correction model.

4.4 Discussion of ECM Estimates

Having conducted the cointegration test, the model in equation 3 was estimated. The results are presented in Table 4. From the results, the coefficient of capital expenditure (*CEX*) is -0.037086 which means that there is an inverse relationship between the amount government expend on capital projects and the rate at which the economy grows. This implies that, a 1 percent increase in capital expenditure brings about a 3.7 percent decrease in economic growth in the short-run. This does not conform to theoretical apriori as it is expected that increase in government expenditure increases the tendency of a positive economic change, hence increases the general output (Wagner, 1883; Smith, 1776). However, the relationship is significant judging from the p-value of 0.0001. The deviation from theory can be tied to the fact that there is gross mismanagement on funds released by the government over years for this purpose. Many at times, projects end up getting less than half of what is allocated for them thereby leading to inefficacy of the funds. This finding supports the claims of Nurudeen and Usman (2010), Rosoui (2015) and contradicts the findings of Laudau (1983) and Darma (2014).

Table 4.4: Result

Dependent Variable: D(GDP)				
Variables	Coefficient	Std. Error	T-statistic	Probability
<i>C</i>	12.61712	3.073588	4.105012	0.0003
<i>D(CEX)</i>	-0.037086	0.008107	-4.574592	0.0001
<i>D(EXR)</i>	0.080154	0.069243	1.157573	0.2559
<i>D(INF)</i>	-0.658204	0.129839	-5.069379	0.0000
<i>ECT</i>	-0.285235	0.185642	-1.536479	0.1346
$R^2 = 0.8382$				
Adjusted $R^2 = 0.8174$				
F-statistic = 40.17578				
Probability = 0.0000				
D-W statistic = 1.9503				

Source: Authors' computation using Eviews 7.

A further look at the result from Table 4.4 shows the coefficient of exchange rate (*EXR*) as 0.080154 with a probability value of 0.2559. This implies that there is a direct relationship between exchange rate and economic growth hence, a percent increase in the Naira to Dollar exchange rate leads to an 8 percent increase in the rate of economic growth. This points toward the importance of currency depreciation. If the value of the Naira falls (increased exchange rate) compared to the Dollar, the rate of economic growth increases since it encourages export to some extent. This affirms the findings of Modebe, Okafor, Onwumere and Ibe. (2012). However, this relationship appears to be insignificant judging from the probability value of the variable.

Inflation rate (*INF*) has a coefficient of -0.658204 which implies an inverse relationship between inflation and rate of economic growth. If inflation increases by 1 percent, the rate of economic growth is retarded by 65.8 percent. This conforms to theory as it is known that higher levels of inflation are unfavourable to the growth of an economy. This finding is consistent with the findings of Nurudeen and Usman (2010) and in contradiction with Oyeleke, Raheem and Falade (2015). This relationship is further backed by the probability value of 0.0000 which indicates that it is indeed a very significant relationship.

Lastly, the error correction term (*ECT*) satisfies the most important condition of a negative coefficient as it is seen to have a coefficient of -0.285235 which implies that when there is a disturbance in the system established by the relationship, it is corrected and adjusted towards short-run equilibrium at a speed of adjustment of 28.5 percent. Although the speed of adjustment seems to be quite low, this may be because the error correction term does not satisfy the second condition- which is in fact, a secondary condition- of a significant p-value. This only means that the error correction is necessary for adjustment but not sufficient.

Table 4.5: Diagnostic Tests

Test Statistics	Result
Serial Correlation: Chi-square(2)	0.0780
Heteroscedasticity: Chi-square(4)	0.4031
Normality: Jarque-Bera	0.4066(0.8160)
Functional Form: Ramsey RESET F-Statistic(1, 30)	0.1788

Source: Authors' computation using Eviews 7.

However, the model is good fit and acceptable for decision making as it is seen from the R-squared value of 0.838292 which implies that about 84 percent of the deviations in economic growth is explained by the variables in the model while the probability of F-statistics shows that the variables are jointly significant in explaining the rate of economic growth and also results of diagnostic tests which indicate that there is neither the presence of serial-correlation nor heteroskedasticity and the estimates portray no indication of multicollinearity.

5. Conclusion and Recommendations

The study employed the Engel-Granger 2-step Error correction technique in estimating the impact of capital expenditure on economic growth from 1981 to 2017. The results indicate a negative and significant relationship between capital expenditure and economic growth while it was discovered from the study that a higher exchange rate improves the economy in the short-run while higher levels of inflation are detrimental to growth of the economy. Furthermore, it was discovered that there is adjustment towards short-run equilibrium at a speed of 28.5 percent if the system is disturbed.

From these, it is therefore recommended that relevant authorities should set a proper system of checks and monitoring on disbursement of funds for capital purposes and execution of projects so as not to have short-fall of the allocated funds. Also, it is required of the appropriate authorities to monitor inflation rates so as to make sure it does not exceed what is necessary for smooth running of the economy. Proper control can be achieved by improving the efficacy of liquidity control instruments. Lastly, a favourable exchange rate system should be maintained and this should be built around a flexible regime so as to ensure that the rates do not wander too far from the required equilibrium which ensures optimal functioning of the economy.

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Entrepreneurial Orientation and Market Innovativeness among Small and Medium Enterprises in Nigeria

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Abstract

The study investigates entrepreneurial orientation and marketing innovativeness among SMEs in Nigeria with the specific objectives of evaluating the association between risk taking and technological innovativeness; determining the impact of pro-activeness on product innovation. The study was conducted among SMEs in Ijebu-Ode Local Government Area, Ogun State. The study adopted the survey design and the data were analysed using linear and t-test methods of data analyses. Structured questionnaire was employed to collect data from respondents. The primary data generated from the questionnaire were used to verify the formulated hypothesis. A total of 140 questionnaires were administered. Results revealed that there was significant relationship between risk-taking and technological innovations. The implication therefore is that entrepreneurs should ensure they take calculated risk in order to enhance their productivity through innovation and that there was need for them to be proactive in their approach to product development as this could improve their quality and productivity.

Keywords: Entrepreneurial Orientation; Market Innovativeness; Risk Taking, Pro-activeness; SMEs

JEL Classification: L26, O31

1. Introduction

The ability of an organization to develop and play a different game is vital in a turbulent economic environment characterized by changes in a short time. For an organization to develop a new strategy, high level of innovation, calculated risk-taking, proactiveness and learning are required through analysis of changes in customer preferences and the behaviour of their competitors (Gheorghe, 2013). The first two decades of this century have been marked by rapid globalization of markets, rapid technological changes and the assertion of competitiveness that have led to market and orientation of entrepreneurial activities as before (Ricardo, Gonzalo & Maria, 2014). The result is an inevitable incorporation of innovations that is an unavoidable business strategy for businesses. An entity must understand the needs of its customers. It must also take into account the strengths, threats,

weaknesses of opportunities, capabilities and strategies of current and potential competitors to use over the long term (Gheorghe, 2013). This allows organizations to identify new product ideas to meet higher-level needs or to introduce new products and brands before their competitors. The role of small and medium-sized enterprises (SMEs) is increasingly crucial to the growth of local and international markets that drive sustainable growth in trading, productive and service sectors by attracting investment. SMEs also maintain a good economic balance by offering employment opportunities to job seekers in an economy (Thongvanh, Sasiwemon & Meta, 2014).

Innovativeness is the ability of an organization to innovate. It is the introduction of new processes, products or ideas into an organization. This ability to innovate is one of the vital factors that have direct impact on business performance (Mohammad & Norbani, 2009). Through innovativeness, managers find solutions to the problems and challenges of the business that are foundation for the survival and success of the organization's future well-being. In addition, innovativeness is one of the factors for which management exercises considerable control. However, studies of innovative factors in an organization have yielded mixed results. While it is generally accepted that innovation contributes to business performance, relatively little is known about the drivers of innovativeness and how they act through innovativeness to collectively influence performance. Therefore, a revision of the existing research perspectives is not theoretically too late in the context of SMEs. It is also relevant because policy and public funds continue to aim to improve the innovative potential of SMEs, especially in developing countries

The importance of local and international SMEs cannot be over emphasized. Similarly, SMEs play a vital role in Nigeria. These businesses are conducive to economic growth, which results in strong economic development in the country made necessary by development of the manufacturing and commercial sector. SMEs involve investing resources to create employment and income opportunities for the Nigerian people. Thus, SMEs improve standard of living of inhabitants of a country. These improvements are essential for modernization and industrialization of the country (Thongvanh, Sasiwemon & Meta, 2014). In addition, small businesses represent an important source of available knowledge for innovation, which increases value and maximizes the use of natural resources to improve the products manufactured and services developed.

Entrepreneurial orientation is the process and decision-making activities employed by different entrepreneurs that lead to the entry and support of business activities and are the process of developing strategies that provide businesses a basis for decisions and actions relating to entrepreneurial activities (Anne & Karanga, 2014). Anne and Karanga (2014) uphold that entrepreneurial orientation includes three variables namely: innovativeness, risk-taking and pro-activeness. Innovativeness is linked to the organization's desire to search for new ideas and concepts in process, products or services development. Pro-activeness is about organization with a future-oriented functionality that is adapted to the industrial environment in which it is involved. Risk-taking means that an organization is looking for an entrepreneurial opportunity without worrying about the resources it may or may not have (Shihping & Yu-Ling, 2011).

Innovativeness is linked to willingness of an organization to look for new ideas and concepts in process, products or services development. Market innovativeness focuses on learning processes from external sources and is a subset of the overall organizational learning activity. Market innovativeness is linked to changing customer preferences and the actions of their competitors (Gheorghe, 2013). SMEs need to constantly identify opportunities in the market to satisfy their customers. Generating new ideas for products and services through collection and dissemination of market information is the starting point for the development of the innovation process.

Constant changes in new business environment, strong globalization of markets and high level of competitiveness are forcing organizations, especially small and medium-sized enterprises to transform or modify their business strategies to adapt to market needs. In this new perspective, entrepreneurial orientation and market innovativeness are the two most vital variables taken into account today by a growing number of SMEs that are important for strategy development (Ricardo, Gonzalo, & Maria, 2014).

Many studies such as Anne and Karanga (2014); Mohammad and Norbani (2009); Thongvanh, Sasiwemon and Meta (2014); Wijesekara, Kumara and Gunawardana (2014) considered the impact of entrepreneurial orientation on performance, growth and competitive advantage of SMEs. These studies were focused on improving performance of SMEs through proper entrepreneurial orientation thereby neglecting the market innovativeness of SMEs. The present study attempts to fill this gap by considering the effect of entrepreneurial orientation on market innovativeness among the SMEs in Nigeria. Specifically, the objective is to evaluate the association between risk taking and technological innovativeness.

This paper comprises of five sections with the first section forming the introduction. Section two deals with the literature review. Section three deals with the methodology, section four deals with result; Section five deals with discussion and implication for management and last section of the paper lists references used in this paper.

2. Literature Review

2.1 Entrepreneurship Orientation

The concept of entrepreneurship is not a relatively new field in business enterprises. Previous authors used different terms to explain the concept of entrepreneurship (Mohammad, Armanu, Ashmad & Fatchur, 2013). They considered entrepreneurial firms as entrepreneurial organizations. Entrepreneurial firms can acquire a competitive advantage over their competitors by making spectacular innovations and taking business risks. Entrepreneurial firm is one that engages in proactive innovation, risky, product market-driven business, as well as its competitors. In development, previous authors use entrepreneurial concept implementation operations to explain existing levels in an entity (Mohammad, Armanu, Ashmad & Fatchur 2013).

Entrepreneurship is a global phenomenon. It is considered a vital activity for business entity. Authors of entrepreneurship, both in popular press and in research literature, have assessed the importance of entrepreneurship. These literature have established a direct association between entrepreneurship and performance (Mohamad & Norbani, 2009). Most countries

view entrepreneurship as an important sector for influencing economic development. Currently, small and medium-sized enterprises (SMEs) are facing market pressure. Thus, to gain a strong competitive advantage, SMEs have become a larger vessel (Mohamad & Norbani, 2009). SMEs are encouraged to implement a strategic entrepreneurial spirit to recognize threats and seize opportunities to ensure that their businesses continue to ensure sustainability of their future.

Entrepreneur often refers to someone who starts a new business. He takes the risk of starting and developing a productive business (Wijesekara, Kumara & Gunawardana, 2014). Moreover, the terms risk, initiative, novelty, independent creativity and innovator are mainly used in definition of an entrepreneur. Wijesekara, Kumara and Gunawardana (2014) believe that the literature is full of definitions of entrepreneurship that vary along a number of definitions, behaviour, or outcomes. Entrepreneurship used by different authors refers to all small businesses and all new businesses. It is related to novelty in the form of new processes, new markets and new products as wealth creation drivers and to the recognition and development of viable opportunities.

Innovation is the main characteristic of entrepreneurial behaviour. Innovation, creativity or discovery is the success factors that underlie the body of thought and research. The important characteristic of entrepreneurship involves innovativeness of individuals. He sees entrepreneurship as a process of the economy moves ahead and he links entrepreneurship with innovation (Anne & Karanja, 2014). Previous researchers have focused on aspects of innovation in the entrepreneurial function. Innovation refers to the single common theme of all forms of enterprise. Economists have emphasized that economic growth and development depend on entrepreneurship and that economic growth of a society is an entrepreneurial function resulting from its innovations. Therefore, entrepreneurial behaviour is the quest for growth through innovation, whether it is purely managerial or technological (Chemi, 2015).

Entrepreneurship specialists view entrepreneurship as a matter of degree (Joanna, 2015). It is a behaviour that can be examined and analyzed by entrepreneurial orientations. Therefore, organizations with respect to levels of entrepreneurship and entrepreneurial orientation are similar to other business directions, considered to represent the basic underlying philosophy of the company as to the nature and scope of its business activities. Entrepreneurial orientation requires business processes, structures and behaviour that are characterized by innovativeness, pro-activeness and risk-taking. Mohamad and Norbani (2009) list the types of organization-level behaviour with respect to entrepreneurial orientation, that is, management's risk taking, behaviour towards leadership trends, and trend of corporate culture to be competitive in the industry. The third dimension of entrepreneurial orientation has been widely studied and widely accepted. Entrepreneurship involves a set of skills that belong to a company to denote innovative behaviour, courage to take risks and a more proactive attitude towards a new market. The previous literature describes entrepreneurial orientation as an important factor in the performance of SMEs (Galina, Karina & Tatiana, 2015).

Entrepreneurial firms are involved in new market innovations. They take businesses and embark on risky projects. They create proactive innovations in front of their competitors

(AbdulQadir & Nor, 2015). Entrepreneurship has three characteristics: innovation, pro-activeness and risk-taking. These are described as the core of entrepreneurial orientation and are often combined to expand a high-level indication on entrepreneurship at the firm-level (Sulkifli & Rosli, 2013). These characteristics are described in detail below:

2.1.1 Innovativeness

Innovativeness is a trend to generate new ideas, controlled processes and novelty through which organizations abandon their old practices and technologies. This is one of the main factors that affect performance of an organization. It is described as perception that requires constant attention by researchers as well as practitioners, as it specifies the degree of innovativeness that characterizes each new product (Wijesekara et al., 2014). The relationship between innovativeness and innovation has been studied and varies considerably in previous studies. Therefore, innovativeness is different from the success of innovation. Innovativeness is a behavioural construct. Innovativeness requires a considerable effort or learning experience from customers. Therefore, to apply innovation in their processes, organizations need to have sufficient information about their customers (AbdulQadir & Nor, 2015).

2.1.2 Pro-activeness

Pro-activeness is to anticipate the future needs of customers and the market and as well respond to them. It also involves developing a preference over its rivals. As a result, proactive organizations benefit from market opportunities. Pro-activeness is important for entrepreneurial orientation because it has an advanced perspective associated with innovative activity and risk management (Muhammad and al., 2013). Proactive organizations deploy considerable efforts to observe the environment to identify new trends and to continue in competition, which is dynamically linked to the market signal. Pro-activeness generates capabilities that allow organizations to develop special products/new markets before the expectations of their competitors and consumers. This is strongly influenced by the open product market strategy and leader's personality. Pro-activeness shows the willingness of an organization to be in advance of its competitors by a combination of both proactive and offensive; for example, to launch new products/services before their competitors and anticipate the future demand for change.

2.1.3 Risk taking

Risk taking is the propensity to suitable high-risk of resources. This involves devoting resources to projects with unrealistic results. Overall, it is the propensity to get away from the normal path and to take the unknown path. As a result, there are three risk aspects of risk: exploring the unknown without knowing the probability of success, risk of investing important resources in a risky project and, finally, personal risk resulting from a potential adverse for a career if these projects fail. Organizations with an entrepreneurial orientation are characterized primarily by risk taking, such as indebtedness or considerable ownership of resources, in order to achieve high return by taking advantage of market opportunities. Similarly, Thongvanh, Sasiwemon and Meta (2014) presented another factor, namely "competitive aggressiveness and autonomy". These two dimensions go beyond the previous three and provide a description of the field of entrepreneurial orientation. They described competitive aggression as the effort of an organization to overcome its market antagonists

by maintaining a position of confrontation and described autonomy as the organization's ability to independently promote ideas and promising enterprise projects.

2.2 Market Innovativeness

In the first human settlements, the phenomenon of innovation has been created. It has an effect on civilizations and cultures. Recently invented innovative production and method of supply have a significant impact on survival of the social group in a competitive environment. Agricultural and industrial revolution resulted from some innovations with significant and permanent impacts on human life (AbdulQadir & Nor, 2015). Organizations with special capabilities will have competitive advantages over their competitors. As a result, these organizations attain new innovation over their rivals (AbdulQadir & Nor, 2015). There are different types of innovations highlighted in this literature. The classification made by Mehrdad et al., (2011) was the most acceptable technological and administrative innovation. Technological innovation is the new processes, products and services, while administrative innovation is the procedures and policies covered by non-technological innovations. Although innovation is a blank term and may include many aspects, however, this study considers product and process innovation capabilities, such as the dimensions of market innovativeness. The major basis of enterprises long-term competitive advantage is created by technological innovation capability. The ability to easily introduce new products and adopt new methods and production processes over a short period of time has become an urgent competitive instrument for these organizations.

AbdulQadir and Nor (2015) have identified market innovation capabilities through the following dimensions: ability to develop new products that meet the market needs; ability to apply process technologies that are suitable for production of these new products; ability to develop and adopt these new technological products and processes to meet future needs; and ability to react to related technological activities and unattended activities created by competitors.

Apparently, all these dimensions are around the organization's capacity in market innovativeness. Thus, market innovativeness is considered to be one of organization's most important factors in managing competitiveness from the perspective of resource-based view because these capacities can provide other useful, rare, differentiated and invaluable and being transformed simultaneously at a higher level of competition.

2.3 Entrepreneurial Orientation and Market Innovativeness

Most organizations can survive in any environment when their demand for products and goods is certain and there are resources to compete with other organizations. AbdulQadir and Nor (2015) believe that simple business strategies are influenced by owner's personality and attitudes, and show that owner-managers who have confidence in their abilities are more likely to be entrepreneurial. Based on this notion, Mohammad and Norbani (2009) consider market innovativeness as a consequence of entrepreneurial orientation. Empirical evidence has shown that understanding of entrepreneurial orientation as one of the essential resources of an organization has a significant impact on its ability to adapt to environmental changes by proposing different types of innovations. As indicated in the relevant literature, an organization with entrepreneurial orientation must be characterized by risk-taking, pro-

activeness and innovativeness in order to understand market and customer requirements and meet these needs through new innovations.

Joanna (2015) clearly illustrates the relationship between entrepreneurial and market innovation. He argues that the main reason for this relationship is represented by one of the dimensions of entrepreneurial orientation, which are a high grade of innovativeness. It is established that product innovation is closely linked to innovativeness. In addition, research has highlighted the role of other dimensions of entrepreneurial orientation, for example, risk taking can enhance the organization's ability to produce new products and processes. Risk taking encourages the organization to devote the essential resources to attain new innovations. Previous studies have also shown a positive influence on pro-activeness on technological innovation and value creation. As a result, entrepreneurial orientation plays a role in market innovation.

2.4 Theoretical Review

2.4.1 Entrepreneurial Orientation Theory at Individual Level

Callaghan developed this theory in 2009. The theory concerns the individual or the enterprise. At the individual level of entrepreneurship, entrepreneurs' definitions can be linked to the definition given to entrepreneur's Cantillon as a rational decision maker who assumes the risk and manages a business. The entrepreneur is also perceived as an economic actor with an economic development engine. Entrepreneurs are considered as economy revolutionaries whose economic function is the realization of new combinations in which they are active. The theory is for entrepreneurs who need more success. It adds to the Schumpeterian spectrum of entrepreneurial orientation, two dimensions; Learning and Achievement orientations.

The individual theoretical base of entrepreneurship has not been without criticism. For example, the theory criticizes individual entrepreneurship prospects and opposes the theory of need-for-achievement as to the impairment of the theoretical process, leading to what they call "excessive simplification of the subject".

Anne and Karanja (2014) assert that the "trait" approach, that the distinctive characteristics of an individual, including personality characteristics, are linked to entrepreneurial variables, are often studied in a wrong way. However, several studies have demonstrated the need for small business entrepreneurs to develop their entrepreneurial and management skills, as good allocation of these two roles is crucial to the survival of small businesses.

2.4.2 Entrepreneurial Orientation Theory at Firm Level

At the organization level, Callaghan (2009) noted that the main entrepreneurial orientation developed with the psychological claim of distinction between managers and business owners, and regretted that it had been abandoned in a relation almost quasi psychological before individual EO-Success relationships have even been studied. One of the strategies making modes proposed is the entrepreneurial who relies on active search for entrepreneurial opportunities and growth. Other modes include planning: it involves the systematic collection of information for situation analysis, generation of alternatives and selection of appropriate strategies; and adaptive mode that focus on responsive solutions rather than proactive seeking new opportunities. Shihping and Yu-Lin (2011) support the

entrepreneurial mode by referring to entrepreneurial management style as a bold, risky and aggressive approach to decision making, as opposed to a more cautious stability-oriented approach. According to Ricardo et al., (2014), an entrepreneurial firm is an organization that launches product markets innovations, undertakes projects that are somewhat risky and is the first to propose proactive innovations, ahead of its competitors. For their part, Mohammad and Norbani (2009) oppose organizations operating in hostile competitive environments, characterized by a strong rivalry between firms and firms operating in more benign competitive settings, and signalling that they tend to adopt more competitive innovations with greater frequency than the latter. Gheorghe (2013) used the innovativeness, risk-taking and pro-activeness dimensions to characterize and test entrepreneurial orientation, while Chemi (2015) has expanded the number of dimensions to include aggression and competitive autonomy.

3. Methodology

The study is conducted to appraise entrepreneurial orientation and marketing innovativeness among SMEs in Nigeria. Particularly, the study was conducted in five areas of Ijebu-Ode Local Government Area because of the presence of entrepreneurial activities and increase in SMEs' activities in the area. These areas included; new market, Ibadan garage, Lagos garage, Oke-Aje and Oyingbo.

The population of the study comprised of all the SMEs in the five study areas which had a total of two hundred and sixteen (216). Therefore, the study's population comprised of two hundred and sixteen (216) SMEs in the Local Government Area. The study population was finite or definite because it has definite figure and also heterogeneous because it consist of unrelated items such as different businesses, different individuals and business sizes.

The total population of two hundred and sixteen (216) of the study is distributed among five areas in Ijebu-Ode Local Government Area, Ogun State. The population was distributed as follows as contained in table 3.1 below:

Table 3.1: Population distribution of entrepreneurs in five (5) areas of Ijebu-Ode Local Government Area

Areas	Population
New Market	38
Ibadan Garage	51
Lagos Garage	49
Oke-Aje	47
Oyingbo	31
Total	216

Source: Researcher's Field Survey, 2019.

The study sample includes 140 SMEs. This was obtained using the Saunder (2007)'s non-proportional systematic sampling technique formula. Thus, the study adopted a survey research design. The design was adopted because of its appropriateness in describing the current situation of a phenomenon. It is also gives factual information.

The type of data that was used in this study was primary. They included questionnaire and personal observation. Primary data allows direct gathering of information from the

respondents. The main instrument that was used was questionnaire. The questionnaire was given a critical look for correction in order to ascertain the validity of the instrument. In order to test the reliability of the questionnaire; it was subjected to the Pearson Moment Correlation Coefficient analysis.

For this study, the analytical techniques employed in analysing the data collected, using the Statistical Package for Social Sciences (SPSS 21.0), were the Simple Percentage Analysis, the Product Moment Correlation Coefficient and the Regression Analysis (ANOVA). The descriptive statistics of the data is shown

Table 3.2: Descriptive Statistics of the Data

Gender	<i>Male</i>	<i>Female</i>			
	63.8 %	36.2%			
Age of Respondents	<i>Below 25 years</i>	<i>26-35 years</i>	<i>36-45 years</i>	<i>46 years & above</i>	
	9.4%	30.7%	25.2%	34.7%	
Marital Status	<i>Single</i>	<i>Married</i>			
	22.8%	77.2%			
Education	<i>O'Level</i>	<i>NCE/OND</i>	<i>HND/BSC</i>		
	19.7%	44.1%	36.2%		
Position	<i>CEO</i>	<i>Top Manager</i>	<i>Middle Manager</i>	<i>Staff</i>	<i>Others</i>
	0.5%	15.8%	35.7%	47.5%	0.5%
Working Experience	<i>1-5 years</i>	<i>6-10 years</i>	<i>11-15 years</i>	<i>Above 16 years</i>	
	18.1%	44.9%	25.2%	11.8%	

Source: Field Survey (2019)

Table 3.2 shows that 63.8% of the respondents were males, while 36.2% were females. This implies that more than average percent of the respondents were males. Also, it is discovered that 9.4% of the respondents were below the ages of 25 years; 30.7% of the respondents fall within the ages 26-35 years, 25.2% of the respondent were within 36-45% while age 46 and above contained 34.7% of the respondents. In addition, marital status indicated that 22.8% of the respondents are single and 77.2% of the respondents are married. Moreover, it identified that educational background indicated that 19.7% of the respondents are O'level holders, 44.1% have an NCE/OND while 36.2% of the respondents are HND/BSC holder. Furthermore, it identified that 0.5% of the respondents are CEO, 15.8% of the respondent are top manager, 35.7% of the respondent are middle manager, and 47.5% of the respondent are staff while 0.5% of the respondents. Lastly, it specified that 18.1% of the respondents have a working experience between 1-5 years, 44.9% of them have a working experience of between 6-10years, 25.2% of the respondents have 11-15 years working experience, while 11.8% of them have a working experience above 16 years.

4. Results

4.1 Hypothesis Testing

H_0 : There is no significant relationship between risk-taking and technological innovation

This hypothesis was analysed using linear regression conducted through Econometric method of data analysis (E-View) version 7 and the result obtained was summarized in table 4.1 below:

Table 4.1: Model Summary

Dependent Variable: TECHINNO			
Variables	Coefficient	t-test	Sig.
Constant	13.501	4.901	0.001
RISKTA	21.431	5.068	0.005
R-Square = 0.812			
Adj R ² = 0.671			
F-Stat. = 8.903			
Durbin Watson = 1.873			

Source: Author's Computations.

4.2 Empirical Analysis

TECHINNO = f (RISKTA).....1

TECHINNO = $\alpha_0 + \alpha_1$ RISKTA + μ_12

So, EPS = 13.501 + 21.431 RISKTA

Durbin Watson = 1.873

F-Statistics = 8.903

4.3 Interpretation of Result

The estimated result for the specified linear regression model in the above table captures the relationship between risk-taking and technological innovation. The fixed effect method was employed for the results, where risk taking (RISKTA) was regressed on technological innovation (TECHINNO).

The summary of result as contained in table 4.2 above indicates that risk-taking (RISKTA) has a positive relationship with technological innovation (TECHINNO) among the selected entrepreneurs in Nigeria during the review period. Thus, this signs conform to the a-priori expectations. In terms of magnitude, the table revealed that 1% increase in risk-taking (RISKTA) enhances technological innovation of the SMEs by 21% coefficient.

In assessing the partial significance of the estimated parameters for the incorporated explanatory variable, the t-statistics results are presented in table 4.11. The result shows that the parameter estimates for risk-taking (RISKTA) was found to be statistically significant at 5% critical level because their *p-values* are less than 0.05 level of significant representing maximum probability attached to the test of risking type I error.

More so, the F-statistic result showed that all the incorporated explanatory variables are simultaneously significant at 5% critical level. The R-squared result reveals that 81% of the total variation in firm's value measured by technological innovation (TECHINNO) is accounted for by changes in the risk-taking (RISKTA) by SMEs. The Durbin-Watson test

result reveals that there is presence of weak positive serial correlation among the residuals, because of the d-value (1.873) is less than two.

5. Conclusion and Recommendation

The study appraised entrepreneurial orientation and marketing innovativeness among SMES in Ijebu-Ode Local Government Area. It has also shown that small and medium enterprises (SMEs) in Nigeria manage both production and marketing activities in an innovative manner. For example, to remain competitive in the market, small businesses introduce new concepts and constantly offer new products and designs. Furthermore, all SMEs focus on personalized and direct communication to customers, which is in some cases associated to the business model of offering customized products. One of the unexpected outcomes is that small businesses in Nigeria cooperate with their competitors and form strategic alliances in order to benefit from economies of scale, to share industrial experiences, as well as to better understand and satisfy latent customer needs. Furthermore, it was noticed that the analyzed SMEs have a rather simplified administration that facilitates flexibility. In regard to proactiveness, the study has shown that small scale businesses in Nigeria are aware of the increasing consciousness of consumers in terms of social and ethical responsibility and react proactively by offering sustainable products with a view of promoting transparency. SMEs are also proactive in networks and constantly look for better distribution channels. Besides, it was observed that SMEs were acting proactively to external changes in order to better understand and satisfy latent customer needs. Concerning risk-taking, the companies encourage well-calculated choices in order to promote market competitiveness.

Based on results of the study, it is recommended among other things that: entrepreneurs should ensure they take calculated risk in order to enhance their productivity through innovation. In addition, there is need for entrepreneurs to be proactive in their approach to product development as this will improve their quality and productivity. Furthermore, there is need for SMEs to be creative in their approach to business operation as this is found to increase their performance. Lastly, entrepreneurs should offer customized products irrespective of their stock levels so as to reduce financial risks of large prior production investments.

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Volume and Value of e-Payment System: Nigeria Banks in Perspective

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Abstract

This research paper looks at the effect of e-payment transactions employing both volume and value of digital instruments currently applicable in the Nigerian financial market using the secondary data methodology. The study aims to highlight the quantum of use both in volume and value of new technological innovation, identify areas of deficiency and offer some solutions for improvement. The study's span based on data availability is six years from 2012 to 2017. To facilitate understanding of the issue under study, the Ordinary Least Square Regression methodology was employed. Finding of the study reveals that there exist a positive relationship between value of e-payment channels and a negative relationship between volumes of e-payment channels to the percentage of financial institutions in real gross domestic product respectively. The paper concludes with a call for cooperation between government and private sector in Nigeria in order to raise the literacy level of e-payment users.

Keywords: Volume, Value, e-Payment, Banks, Nigeria

JEL Classification: E42, G21

1. Introduction

This digital payment system has revolutionised developments in economic activities, in financial management and in the entire global corporate operations (Slozko & Pello, 2015) by enhancing organizational performance (Ali, 2010). In most advanced countries of the world, new digital payment transaction services are emerging and are increasingly improved upon as instant replacement for cash and cheques (Bech, Faruqui, Ougaard & Picillo, 2018). Both whole and retail transaction payments are continually embracing the e-payment services which are seen to be faster, more convenient and efficient (Kung, 2018). The European Central Bank (ECB) defines e-payments as transactions made over the internet using distant payment cards, online banking instruments or e-payment providers with which the consumer has established relationships (ECB, 2010). The Committee for Payments and Market Infrastructures (CPMI) observed that, innovations in information and telecommunication technology are exerting pressure on the earlier bank-based payment services both in and across geographies (CPMI, 2015). The urge to go digital by banks,

especially using smart phones in some developing countries for example, has allowed payment systems to leapfrog those in more advanced economies (CPMI, 2016). In Nigeria as in many other developing countries, lots of financial transactions are carried out using the mobile payments stream without any recourse to bank accounts.

These e-payment transactions in banks show a shift away from cash and cheques towards a digital payment system. In Nigeria, bank customers rely more and more on e-payments using various transaction instruments such as the electronic fund transfer (N-EFT), automated payment services (N-APS), instant payment services (N-IPS), point of sale (PoS), internet based services (WEB), the automated teller machine services (ATM) and the mobile money transfer services (MMO). This reliance is due to the collaborative effort of government and the private sector in raising awareness of people on the need to go cashless in order to boost the economic output of Nigeria (Amadeo, 2018; Kabir, Saidin, & Ahmi, 2015).

1.1 Problem Statement

Despite the wide acceptance of e-payment transactions in Nigeria, only few studies are yet to pinpoint how this innovation contributes to growth of the Nigerian economy. Since banks and other financial intermediaries in Nigeria continue to adopt and embrace e-payment, there is the need to find out how the volume and values of these transactions encourage the growth of the banking industry and the Nigerian economy at large.

This study measures Nigeria's economic growth hence development by employing real gross domestic product as dependent variable while volume and value of seven e-payment instruments are the independent variables. According to Amadeo (2018), real gross domestic product is a measurement of economic output that accounts for the effects of inflation or deflation.

RGDP provides a more realistic assessment of growth than nominal GDP. Without real GDP, it could seem like a country is producing more when it's only that prices have gone up. Real GDP is an inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year (Kenton, 2018). In other words, the overall economic indicator for the economy is the Gross Domestic Product (Wolla, 2013).

1.2 Research Objectives

The objective of this study is to assess the impact of e-payment transaction on Nigerian banks in terms of value and volume and its effects on real gross domestic product.

The study is further driven by the African Development Bank's call for African countries to strengthen their economic flexibility and drive to lift their economies to a new growth equilibrium driven by technological innovation and productivity (ADB, 2018). Moreover, the call for digital revolution in the Nigerian banking system by the apex regulatory authority (the CBN) is in the right direction and provides the much needed motivation for this study (CBN, 2011).

1.3 Research Hypothesis

H_{01} : Value of e-Payment has no significant effect on performance of the Nigerian banking industry.

H_{02} : Volume of E-Payment has no significant effect on the performance of the Nigerian banking industry.

2. Literature Review

2.1 The Evolution of Nigerian E-Payments System

According to Amudi (2015) the Nigerian payments system has evolved from manual transactions to online electronic digital system. The e-payment revolution started in Nigeria around 2007 as a response to growing internationalization of business and commercial activities using the cyber space/technology (Salawu & Salawu, 2007). Under the new arrangement, merchants do not require to display their products physically for assessment since an online store is just as efficient. Merchandise can be accessed around the world by consumers who may order goods and services by mobile technologies. New business development globally requires fast, effective, efficient, and secure settlement system (Meltzer & Marulanda, 2016). The hitherto traditional means of cash payment as medium of settlement has become almost impossible because it is ineffective and time wasting. Consequently, telecommunication companies saw an opportunity into this new profitable idea and began research to provide service solutions aimed at solving the problem. This new era in digital technology marked the beginning of Nigeria's e-payment system with the Central Bank of Nigeria ("CBN" or the "BANK"), empowered by law to serve as the overall regulator of the country's financial system.

2.2 Nigeria's e-payment Regulatory Regime

Baldwin, Cave and Lodge (2012) define regulation as formal legal rules aimed at controlling the behaviour of individual or corporate entities by state-appointed actors with the objective of benefiting the human race. Accordingly, the CBN is vested with powers to regulate matters concerning Nigeria's fiscal and monetary policies (Omotubora & Basu, 2018). Example, Section 47 (2) and (3) of the Central Bank of Nigeria (Establishment) Act (the "Act") empowers the CBN to facilitate, promote the development of effective and efficient settlement systems which include e-payment transactions (Tijjani & Ilugbemi, 2015). The Bank is also empowered to set rules and regulations for successful operations of all clearing and settlement systems. However, until quite recently, the CBN was not as technically equipped as it is today to regulate and manage electronic payment systems in Nigeria. Therefore, most of the activities in the sector were unregulated as the CBN only issued letters of authorization to companies wishing to operate payment systems in Nigeria. It was not until quite recently that the CBN began to issue circulars and guidelines on the operation of e-payment system in Nigeria. For instance, the guidelines on electronic payment of salaries; pensions, suppliers and taxes in Nigeria, guidelines on transactions switching services; guidelines on Point of Sale (PoS) card acceptance services; and regulatory framework for mobile payments services in Nigeria were all issued by the "BANK" in February, 2014 (Adu, 2016).

Furthermore, on 9th July, 2015, the CBN released an inprint titled 'sanctions on erring banks and e-payment service providers for infractions of payments rules and regulations. This guideline prescribes appropriate sanctions to e-payment operators in the Nigerian payment system for infringements. Moreover, the CBN through an exposure draft issued on 9th September, 2015, aimed to codify most of the CBN's existing guidelines on all electronic

payments system in Nigeria. This marked the beginning of Nigeria's regulatory regime on e-payment service providers in the Nigerian payments system industry such as, the card schemers, card holders, and merchant acquirers, card merchants, switching companies, payment solution system service providers ("PSSP"), issuing banks, internet service providers, Nigerian Central Switch (NCS), Nigerian Inter-bank Settlement System (NIBSS), Payments Terminal Service Aggregator (PTSA) and many others (CBN, 2012).

2.3 Objectives of Nigeria's E-payment System

It was not until 2007 that the CBN launched the e-payment system code named Vision 2020. This vision was given series of objectives to increase the resilience of the digital payment infrastructure and to encourage the usage of electronic payment methods in Nigeria (CBN, 2018). The vision 2020 is also aimed at facilitating growth in economic activities by providing safe and efficient mechanisms for making and receiving payments with minimum risks to the CBN, firms and individuals. It is further aimed at extending e-payment availability and usage to both banked and unbanked jurisdictions through service providers to end users. Nigeria's e-payment system is finally envisaged to conform to internationally accept technical, operational and regulatory standards. In the light of above objectives, the CBN began to develop the technical skills to regulate the industry by putting in place the required regulatory framework to achieve these goals. Consequently, it is now practically impossible to do anything in the Nigerian payments industry without CBN approval (CBN, 2018). The bank currently issues a Payment Solution System Service Providers ("PSSP") licence to operators of web payment portals and gateways. With this idea, the CBN aimed at bringing all participating entities in the Nigerian e-payments system within its reach for ease of supervision and control.

2.4 Advantages of Electronic Payment Systems

In this age of technological evolution, more bank customers are showing preference for virtual wallets rather than cash (Acha, Kanu & Agu, 2017). According to an online exchange market global leader (unichange.me, 2018), it is clear, electronic payment systems have a range of advantages in comparison to old banking services. These include, time saving, convenience, expense control, reduced risk of losses, low commission charges and user friendly.

2.5 Dis-advantages of Electronic Payment Systems

Mamta, Tyagi and Shukla (2016) observed that, although there are lots of advantages of the e-payment system, it never-the-less has some drawbacks which include transaction restrictions, risk of hacking, transfer between different payments systems, lack of anonymity and lack of electricity to access the internet.

2.6 Conceptual Issues in Nigerian E-payment System

The global digital technology has come up with lots of innovations and with it comes different names to identify and enhance performance of this technology driven payment instruments and services (Omotubora & Basu, 2018). Nigeria is also not left behind in such innovative concepts some of which will be explained below.

2.6.1 The Nigeria Central Switch (NCS)

The Nigerian interbank settlement system (NIBSS) also known as Nigeria Central Switch is responsible for the inter connection between various players in the financial system. This system allows the various players such as banks, mobile payment operators, non-bank financial institutions, payment terminal providers, card acquirers, government institutions and all other customers to process, send and receive funds, instruments and other documents commonly and electronically. In order to create a level playing field for all players, these switches allow both old and new players in the financial industry to seamlessly plug into the financial services sector for easy interface with their customers.

2.6.2 Nigeria Instant Payment (NIP)

Nigeria instant payment is the first and only revolutionary point to point innovative e-payment solution transfer service that guarantees instant value to beneficiary in the banking industry. This e-service system is offered in both bank branch network and mobile internet banking platforms for corporate entities and individuals. This Nigeria's internet service solution is in fact the only one in Africa and indeed, the world over (Kabir, Saidin, & Ahmi, 2015).

2.6.3 Nigeria Automated Payment Services (NAPS)

This is an integrated multi-bank payroll and bulk e-payment and e-collection platform. NAPS is designed for pension personnel records, instant processing of payroll, schedule delivery and payment, fund transfer execution, proceeds collection, direct debit and other payment instructions. This is an inter bank transaction service which came about as a result of the desire by Nigeria inter-bank settlement system (NIBSS Plc.) to strengthen, improve and enhance its bulk payment processing and operational efficiencies to its customers.

2.6.4 National Electronic Funds Transfer (NEFT)

This is an electronic funds transfer system which facilitates transfer of funds to other bank accounts across the country. This is a simple, secure, safe, fast and cost effective way to transfer funds especially for retail banking remittances. This e-payment system was first used by the reserve bank of India in 2005 (CBN, 2012). The e-digital solution was designed, established and maintained by the Indian Institute for development and research in banking technology (IIBRBT). NEFT has gained popularity among the e-payment systems in Nigeria due to its time saving and ease of transactions. Although not all banks in Nigeria use the NEFT, one of Nigeria's old generation banks-the Union Bank of Nigeria currently offers this facility to customers across branches.

2.7 Empirical Review of Literature

Prior studies in the context of e-payment system by scholars dwelled on a number of topics. For instance, Ogbeide (2019) researched on the effects of cashless policy on financial inclusion in the Nigerian emerging economy. Ailemen, Enobong, Osuma, Evbuomwan and Ndigwe (2018) wrote on electronic banking and cashless policy in Nigeria. The study by Uchechukwu, Chubuzor, Donatus and Gloria (2017) studied the effect of cashless policy on the performance of Nigerian banks from 2008 to 2015. However, Igudia in 2017 examined e-payment adoption while Shuaibu and Muhammad (2016) wrote on its challenges. Other studies by Acha *et al.* (2017); Joseph and Richard (2015); Yaqub *et al.* (2013) studied the

benefits and challenges of the e-payment system. The benefits of cashless policy to Nigerian economic development were specifically studied by Adu (2016). Further studies by Okoro (2014) examined the impact of selected e-payment instruments on the intermediation efficiency of the Nigerian economy using time series data from 2006 to 2011 and employing the multiple regression technique. Using intermediation efficiency indicators the author discovered that there was a significant relationship between ATM, PoS, Internet service values and the intermediation efficiency of the Nigerian economy. However, the study also reveals that there was no significant relationship between mobile service value and intermediation efficiency of the Nigerian economy within the period under study. However, Mago and Chitokwinda (2014) opined that the e-payment strategy has significantly affected the growth of online businesses, thereby creating diversification in the commercial industry. Moreover, Kujur and Shah (2015) considered the impediments some developing countries might face while adopting the new payment system. The authors found the likelihood of processing errors, system disruptions, fraud or other unanticipated events if such good policy was not well implemented and managed.

Chemtai (2016) posits that, the transition to electronic banking offers major opportunities in terms of innovation and competitive advantage. This initiative created an opportunity for Nigerian banks to develop a stronger business relationship with their customers. On their part, Ugwueze & Nwezeaku (2016) studied the relationship between electronic banking and the performance of Nigerian commercial banks from 2009-2013 proxy by value of Point-of-Sale transactions and customers deposits respectively. The results show that POS was not co-integrated with both the savings and time deposits but was co-integrated with demand deposits. In a study of 70 countries around the world between 2011 to 2015, Zandt (2016) reports that, Moody's analytics found electronic transactions contributing about \$296 billion to global GDP and about 206 million jobs created within the same period. The study by Adesanya (2017) investigated the critical areas that could facilitate the increase in financial inclusion to all stakeholders and relative importance and the possible implications of promoting financial inclusion for monetary policy and financial stability in terms of regulation of the Nigerian banking industry and its payment system. The study found that only those who have relationship with the regulated financial players (such as commercial banks, microfinance banks and mobile money operators) are recognized as financially included. A most recent study by Mustapha (2018) relates market risk exposure of Nigerian banks due to electronic payment technology by employing the panel least square autoregressive model. Findings of the study revealed that bank performance have increased due to the adoption of the electronic payment technology.

This current study is unique in the sense that, to the best of the researcher's knowledge, it is one of the first to document e-payment system using value and volume of transactions in banks of developing economy to boost Real Gross Domestic Product (RGDP) of Nigeria.

2.8 Theoretical Underpinning

This study employs the Diffusion of Innovation Theory of Everett Rogers to explain the relationships. According to this scholar, technology adoption as an innovation involves the spontaneous spread of modern thinking (Rogers, 1995). In this theory, the existence of an innovation is seen to cause uncertainty by potential users which may imply lack of

predictability of useful information. Dearing (2009) posits that diffusion does not necessarily mean that, a new product or practice must succeed or even reach the poorest people, this study ably captures the three distinct processes of presentation, acceptance and integration needed by every new cultural element such as the e-payment system in Nigeria. This current study considers the diffusion theory as being able to explain whether or not the current innovation in the banking industry is able to give a positive push for growth in such a developing country as Nigeria.

3. Research Methodology

The methodology used in any research work is very important as it provides bedrock for the research study. This study employed published secondary data sourced from various publications of the CBN bulletin, reports published by the CBN and those of various research scholars on related topics for the period of six years from 2012 to 2017. The study further employed the filtration process to extract seven e-payment instruments out of the 12 payment systems currently used in Nigeria for the stated period (Kantudu, 2006). This is because according to the Central Bank of Nigeria (CBN) statistical bulletin, these seven e-transaction instruments are the ones in frequent use since the beginning of Nigeria’s financial inclusion effort (CBN, 2011). They are hence the ones which data are readily available for this research. The population of the study which is also the study’s sample size is made up of all the 21 commercial banks listed on the floor of the Nigerian Stock Exchange.

3.1 Model Specification

The Ordinary Least Square (OLS) method of regression analysis was used to specify the model for this study. The model in its structural form is stated as follows:

$$RGDP_{FI} = f(VOL_{E-PAYMENT}, VAL_{E-PAYMENT}) \dots\dots\dots 1$$

Where;

$RGDP_{FI}$ = Percentage of Financial Institutions in the Real Gross Domestic Product

$VOL_{E-PAYMENT}$ = Volume of e-payment within the period under study

$VAL_{E-PAYMENT}$ = Value of e-payment within the period under study

4. Results and discussion of Findings

This research study followed the recommendations by Zango and Idris (2018) and Jelilov and Musa (2016) in the use of ordinary least squares (OLS) regression analysis. These authors posit that the use of OLS is very common because of its peculiar properties of efficiency, minimum variance, consistency and non-biasness under the panel data estimation technique. Besides, Kilmer and Rodriguez (2016) posit that OLS is a generalized linear modelling technique for estimating relationships that may be used in both single and multiple explanatory variables because of its low measurement error.

Table 4.1: Descriptive Statistics

	Mean	Std. Dev.	Skewness	Jarque-Bera (Prob)	Observations
$RGDP_{FI}$	1700.137	147.9562	-0.633061	0.618036 (0.734168)	6
$VOL_{E-payment}$	7.22E+08	3.97E+08	1.054903	1.129202 (0.568587)	6
$VAL_{E-Payment}$	5.17E+13	2.10E+13	0.543252	0.460051 (0.794513)	6

The above Table presents the descriptive statistics for the studied variables. There is an exhibition of positive mean return for all the variables of the study. Also the sum squared deviation row which represents the net change over within the sample period of the study is positive. In terms of skewness, volume of e-payment channels and value of e-payment channels have return distribution that are positively skewed, whereas the percentage financial institutions in the real gross domestic product shows a negative skewness which implies that it has a long left tail. Finally, all the variables are relatively normally distributed as indicated by their respective p - values as shown by the Jarque-Bera statistics.

Table 4.2: Regression Analysis

R ²	F-Test (Prob.)	Variable	t-Test (Prob.)	Coefficient
0.7873	5.5527 (0.0980)	VOL _{E-Payment}	-1.6832 (0.1909)	-6.77E-07
		VAL _{E-Payment}	2.3409 (0.1011)	1.78E-11
		C	9.2836 (0.0026)	1270.494

Dependent Variable: RGDP_{FI}

The coefficient of determination with an R² of 0.787317 indicates that, the model is strong. This is because the analysis result shows that 79 percent of the variations noted in the contributions of financial institutions in real gross domestic product were caused by the independent variables employed in this study whereas the remaining 21 percent of the changes occurred due to other variables that were not included in this study.

Further analysis shows that the F-statistic of 5.552734 and its corresponding probability value of 0.098085 of the independent variables employed in this study were not statistically significant in explaining the workings of the percentage financial institutions in real gross domestic product. These facts are explained from the p -values of 0.098085 which is slightly greater than the 5% confidence interval. In this regard therefore, the null hypothesis is accepted. From the above analysis, the estimated form of the specified model is as below:

$$RGDP_{FI} = 1270.494 - 6.77E-07VOL_{E-PAYMENT} + 1.78E-11VAL_{E-PAYMENT}$$

The regression model above shows that there is a positive relationship between the value of e-payment channels and the percentage of financial institutions in real gross domestic product. It is further found that, a negative relationship exists between the volume of e-payment channels and the percentage financial institutions in real gross domestic product. This means that a unit change in the percentage of financial institutions in real gross domestic product will cause an increase in the value of e-payment channels while it will lead to a decrease in the volume of e-payment channels by 1.78E-11 and 6.77E-07 respectively.

The t-values above show that none of the performance of the engaged independent variables were significant enough in explaining the workings of the percentage financial institutions in real gross domestic product. This is made known by all the corresponding probability values which are greater than 0.05 (that is, 0.1909 > 0.05 for volume of e-payment channels and 0.1011 > 0.05 for value of e-payment channels). However, the coefficient is statistically significant with a probability value of 0.0026 which is less than the 5% confidence interval.

4.1. Test of Hypothesis

4.1.1: First Hypothesis:

H_{01} : Value of E-Payment has no significant effect on the performance of the Nigerian banking industry.

The t-test of 2.340955 (and its corresponding probability value of 0.1011) for the value of e-payment and the contributions of the banking industry to the growth of Nigerian economy, the result shows that the value of e-payment probability of 0.1011 is greater than the 5% confidence interval, as such, we accept the null hypothesis that value of E-Payment has no significant effect on the performance of the Nigerian banking industry.

4.1.2: Second Hypothesis:

H_{02} : Volume of E-Payment has no significant effect on the performance of the Nigerian banking industry.

With the t-test of 1.683230 (and its corresponding probability value of 0.1909) for the volume of e-payment and the contributions of the banking industry to the growth of Nigerian economy, the result shows that the volume of e-payment probability of 0.1909 is greater than the 5% confidence interval, as such, we accept the null hypothesis that volume of E-Payment has no significant effect on the performance of the Nigerian banking industry.

5. Conclusions and Recommendations

The rate at which e-payment has been embraced in Nigeria is quite promising. Both private, public sectors and even individuals are increasingly employing the e-payment system. The volume and value of e-payment transactions has been growing every year. Although the use of cash is slowly decreasing, cheque usage has been coming down steadily in recent years. Indeed, even cash withdrawals at ATMs have been coming down except during the peak period of salary payment by civil servants. This study therefore investigated the effect of electronic payment platforms on payment transactions employing both volume and value of digital instruments. This was done in order to broaden the curiosity of electronic payment users and researchers in the field of finance. Findings from this study reveal that value and volume of e-payment channels have no significant effects on bank performance and impliedly real gross domestic product. This is in line with empirical evidence by Kashif and Mohammad (2016) and Uchechukwu, Chubuzor, Donatus and Ejeagbasi (2017) who independently found huge technology expenses in the books of Pakistani and Nigerian banks respectively. These findings support the diffusion of innovation theory where Dearing (2009) categorically informed that diffusion does not necessarily mean that, a new product or practice must succeed or even create value for development.

Government should continue to collaborate with the private sector for a better business landscape for everyone to enjoy the convenience and efficiency of e-payments which include simplicity, swiftness, safety and seamlessness. This study finally recommends a strong regulatory regime by government to set general standards of technical security on the e-payment system due to market constraints such as information asymmetry and other externalities which can undermine even the most effective self-regulatory regimes.

Since payment systems are the origin of central banking (Schnabel & Shin, 2018) and the channel through which technological innovation first beneficially affected the financial

sector (Volcker, 2010), a study of the impact of the ATM and PoS on trading activities in both urban and rural communities in Nigeria could be worthwhile.

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Effects of Sustainability Reporting on Corporate Performance of Selected Manufacturing Companies in Nigeria

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Abstract

Activities carried on by corporate organizations tell on the immediate and remote environment in which they operate. In recent times, sustainability has become an issue of major concern around the globe. Environmental catastrophes brought environmental issues to the forefront since the late 1960s, and such events stimulated a flow of concern which has led to sustainability reporting. It is observed from most financial statements of corporate organizations that it has engendered disclosures of information which totally exclude environmental issues, at best where reported, are grossly inadequate. Environmental disclosures have become critically important to an informed public and financial stakeholders. It is as a result of this that this study evaluates the effect of sustainability reporting on corporate performance of quoted manufacturing firms in Nigeria. The study obtain secondary data from the annual report of quoted manufacturing firms on the Nigerian Stock Exchange (NSE) spanning from 2010 to 2017. The Panel regression technique was adopted to analyse data collected. The result showed positive significant effect on return on equity as indicated by coefficients (0.4852 and 0.0500) prob (0.0000 and 0.0036) respectively at 5% level of significant. The study concludes that sustainability reporting has significant effect on corporate performance of quoted manufacturing firms in Nigeria. The study therefore recommends that Management of manufacturing firms should develop a positive disposition towards cost of environmental remediation and adopt pollution control friendly practice in order to restore and guarantee stable and smooth operations. This will in turn improve performance of their respective companies and employees with a view to yielding optimal performance in future.

Keywords: Sustainability Reporting, Corporate Performance, Return on Equity

JEL Classification: M14, Q56

1. Introduction

The existence of business organization is to create and maximize wealth for its owners. The shareholders are the capital providers and ultimate risk bearers for the business. It therefore follows that its resources are traditionally applied to reward the provider of capital. More often than not, activities carried on by these organizations tell on the immediate and remote environment in which they operate. In recent times, sustainability of the environment has become an issue of major concern around the globe. Environmental catastrophes brought environmental issues to the forefront since the late 1960s, and such events stimulated a flow of concern which has led to sustainability reporting (Soderstrom, 2016).

Environmental sustainability entails fulfilling the aspiration of the present generation without compromising the ability of future generations to meet their own needs. There has therefore developed an increased investors' demand for corporate disclosures of information on the environment in the form of company's sustainability report. As a result, sustainability reporting as part of corporate reporting is fast gaining momentum especially with the adoption of International Financial Reporting Standards (IFRS) which emphasizes a lot on environmental disclosures.

Sustainability reporting as described by Elkington (2004) is the integration of reporting and accounting for social, environmental and economic development in corporate reporting. The concept of sustainability reporting maintains that while a firm strives to achieve its traditional objectives of maximizing profit, it is important that this profit is maximized through activities that seek to incorporate social and environmental considerations into the process of making verdict.

Popa, Blidisel & Bodga (2009) are of the view that corporate transparency and disclosures are more useful when sustainability reporting is incorporated. Sustainability reporting provides information that increases corporate transparency and accountability in economic, environmental, social and governance terms. It provides information not entirely captured in traditional corporate financial reports.

According to Gould (2011), sustainability reporting is necessary to equip stakeholders with information of an organization's performance in tangible aspects. In 2011, the International Federation of Accountants (IFAC) developed a sustainability framework, enabling business organizations to incorporate sustainability issues in their business approach, process and reporting practices. The reporting aspect of IFAC's sustainability framework involves providing audit and assurance on sustainability performance to enhance the credibility of sustainability reports, incorporating sustainability impacts in financial statements, and employing narrative reporting to capture sustainability information not included in financial statements.

Klynveld Peat Marwick Goerdeler, (2015) show that South African companies are taking the lead in the practice of sustainability reporting on the African continent; although, companies in Nigeria are also implementing this practice. It has been agreed by world business leaders that sustainability tells on a firm's corporate responsibility, therefore any company that does not produce sustainability report could be seen as working towards unsustainable development (Dorweiler and Yakhou, 2003). Archons within business

organization are coming under increased pressure to not only reduce costs, but also to minimize environmental impacts on their operations. Regrettably, substantial impact on the environment has left Nigeria with huge economic, social, and environmental bequest. This pressure is coming from a broad group of stakeholders which include but not limited to employees, investors, regulatory bodies, non-governmental organization, customers, the host communities and the finance providers.

Stakeholders are pressurizing organizations to ameliorate and report environmental performance. Due to stakeholders' insistence, environmental costs are not commensurate with its returns and benefits. There is increasing in-acceptability that conventional management accounting practices often do not provide accurate and enough information for environmental-related cost management. Thus, many organizations significantly underestimate cost and benefits of sound environmental management (Gray, 2006).

It is important to note that investors that give consideration to ethical issues will only invest in ethically responsible companies. Ethical companies therefore, have marketing advantage if they strategically position themselves environmentally. More so, the challenge of cost and valuation for damage, degradation, and depletion of environment externalities is a critical problem which continues to demand attention.

Since current requirement for reporting information on environmental issues in financial statement is voluntary (Environmental Impact Assessment Act of 1992), it is observed from most financial statements of corporate organizations that it has engendered disclosures of information which totally exclude environmental issues, at best where reported, are partially disclosed. Environmental disclosures have become more important to informed public and financial stakeholders.

Environment accounting entails identification, measurement and allocation of environmental costs, and the integration of these costs into business and communicating such information to companies' stakeholders (Bassey, Sunday & Okon, 2013). In this sense, it ensures good corporate governance that includes transparency and accountability in its societal activities. The non-challant attitudes of several firms not to take environmental accounting into consideration make their performance on environmental disclosure below expectation.

Accountants, as the basic watchmen and light bearer of economic development can no longer shut their eyes to the effect of environmental issues on business management, accounting and audit and disclosure system. Protection of environment and the potential involvement of accountant is becoming a common subject of discussion among accountants all over the world (Nnamani, Onyekwe & Ugwu 2017).

At present, few accounting standards are issued for, or require disclosures on accounting treatment of environmental disclosure. Some guidelines regarding environmental reporting have been issued by many organizations such as International Chamber of Commerce, the Chemical Manufacturing Association, the Japanese Industry Association, Intergovernmental Working Group of Expert on Intimation Standards of Accounting and Reporting. However, these guidelines are not mandatory but advisory in nature (Kercher, 2006). Currently, the adverse environmental effect of economic development has become a

subject of public discussion all over the world. Gradually, environment is becoming a much more urgent economic, social and political problem.

However, determining the appropriate pollution prevention approach often leads to additional decisions that must be made by management. These decisions require information about costs and benefits. Traditional cost accounting approach has become inappropriate since conventional accounting practices have ignored the major environmental cost and activities. Corporate neglect of environmental costing created gap in financial information reporting (Nwaiwu & Oluku 2018). Therefore, the adverse effect on the environment could negate corporate financial statements such as creation of actual or contingent liabilities which may have adverse impact on asset values. It is in view of the aforementioned problems that necessitated the need for this study. Thus, the central point of this study is to investigate the effect of sustainability reporting on corporate performance of selected quoted manufacturing companies in Nigeria.

There are studies on environmental reporting, which convey information on environmental performance. Studies such as Nwaiwu and Oluku (2018), Asaolu, Agboola, Ayoola and Salawu (2011), Obiamaka, Akintola and Francis (2017), Uwuigbe, et al. (2018), Nnamani, Onyekwe and Ugwu (2017), Asuquo, Dada and Onyeogaziri (2018), Owolabi, Taleatu, Adetula and Uwuigbe (2016), Owolabi (2009) and Uwuigbe (2011) focus on oil and gas sector, deposit money bank and brewery firms in Nigeria.

There is extensive literature that discusses effects of sustainability reporting on the performance of firms in Nigeria, but there is scarce evidence from prior literature that empirically examines the relationship between sustainability reporting and corporate performance in the country. It is thus a pioneer study which is non-existent in Nigerian literature in respect of manufacturing companies to the best of researcher's knowledge and this has been the justifiable gap for this study.

The study is significant in the sense that it would be of immense benefit not only to the companies in the Nigerian manufacturing sector, but also to the Nigerian economy in its entirety in improving sustainability reporting and enhancing value driven performance for company's survival.

Thus, it is necessary for manufacturing companies in Nigeria to be able to put into consideration sustainability reporting activities and grow over time, if they are ever to play an increasing and prominent role in creating value adding output for stakeholders. Based on this, the following research questions became pertinent: To what extent does community development cost influence the return on equity of quoted manufacturing companies in Nigeria? And in what way does cost of environmental remediation and pollution control affect return on equity of quoted manufacturing companies in Nigeria?

This study evaluates the effect of sustainability reporting on corporate performance with specific reference to selected Nigerian manufacturing companies. The period of study is eight (8) years (between 2010-2017). The specific objectives are to: assess the extent to which community development cost influence the return on equity of selected quoted manufacturing companies on in Nigeria; and to evaluate the effect of cost of environmental

remediation and pollution control of return on equity of selected quoted manufacturing companies in Nigeria.

2. Literature Review

2.1 Conceptual Issues of Literature: History of Sustainability Reporting

Advocacy for corporate sustainability reporting by leading governments has been on the increase with the coming together of Brazil, Denmark, France and South Africa, in support of the United Nations Conference on Sustainable Development (Rio+20). The aforementioned countries attracted the support of the Global Reporting Initiative (GRI) and United Nations Environment Programme (UNEP). These two bodies became part of recognized leading institutions in sustainability reporting. The GRI has been developing frameworks and guidelines which organizations are employing to report on sustainability. These frameworks include Reporting Guidelines which include the indicators of sustainability reporting which organizations can use in measuring and reporting their sustainability performance. In addition, the United Nations Environment Programme (2012) emphasizes the need for partnership between countries and organizations towards actualization of the goal of sustainable development through provision of relevant information to enable the former improve the quality of life for their people, without putting future generations at risk.

According to Dilling (2010) the European Union (EU) encourages voluntary sustainability reporting. Some countries in the EU such as Denmark, Finland, Sweden, Belgium, the Netherlands and Germany have either legislative or non-legislative bodies which drive social responsibility and sustainability reporting. The Association of Certified Chartered Accountants (2004) notes that the first sustainability reports in Africa and the Middle East were published in 1993 and since then reporting has grown slowly. Majority of the corporate sustainability reporters and reporting developments have occurred in South Africa. For instance, the King Code II (now revised) corporate governance report in South Africa has been noted as the first in any African jurisdiction to include a comprehensive section on integrated sustainability reporting. There is the King III Code of corporate governance with effect from 2010 requiring, amongst others, that, companies incorporate sustainability reporting and disclosures into their financial reports (Integrated Reporting and Assurance Services, 2012).

The United Nations Environment Programme (2013) disclosed that there was a coming together of South Africa, Brazil, Denmark and France in 2012 to support paragraph 47 of the UN Conference on Sustainable Development. According to the United Nations (2012), in paragraph 47 the importance of sustainability reporting is recognized; interested stakeholders in industry, governments, and non-governmental organizations have been encouraged to design ways through which the goal of sustainable development can be actualized. The governments of Austria, Columbia, Norway and the Switzerland have also joined South Africa, Brazil, Denmark and France in favour of Paragraph 47 of the Rio+20 outcome document on this same issue.

The Nigerian experience towards corporate sustainability reporting is still evolving. According to Okoye and Ngwakwe (2004), increasing awareness of social and

environmental issues is resulting in clamours for sustainable economic development. There is also a shift towards stakeholder-oriented corporate governance requirements depicted in the changes made to the Code of Corporate Governance for companies operating on the stock market. This code was issued by the Securities and Exchange Commission - SEC (the stock market regulator) in Nigeria. This regulatory board demands that companies incorporate the requirements of the Code in line with reporting on sustainability as part of their corporate governance from the year 2012 (Securities and Exchange Commission, 2011). In furtherance of this course, the Central Bank of Nigeria (CBN) sent a specific circular to financial institutions in September 2012, advising them to incorporate sustainability issues in their corporate reporting by December 31, 2013 to enable them produce a stand-alone report by December 31, 2014. Therefore, financial institutions are expected to abide by a set of sustainable banking principles to promote sustainability reporting (Central Bank of Nigeria, 2012).

Nigeria as a member of the United Nation impliedly adopted the UN global compact on global reporting initiative (GRI) which provided sustainability reporting guideline in 2000 to design and build acceptance of a common framework for reporting on the linked aspects of sustainability. It is in the light of the above, amidst growing demand by the society, over economic, social and environmental accounting company's performance that more research work on sustainability accounting becomes imperative.

Sustainability Reporting is not an end in itself but a means to an end. Sustainability reports are meant to provide stakeholders with information on economic, social, and environmental performance of the reporting organization.

2.2 Standards and Guidelines on Sustainability Reporting

A number of standards, guidelines and organizations are crucial in the development of sustainability reporting. Muller (2011) identifies these guidelines as emanating from the Carbon Disclosure Project (CDP), International Standards Organization (ISO), Global Reporting Initiative (GRI), Greenhouse Gas Protocol and United Nations Global Compact (UNGC). Also, assurance of sustainability disclosures and reporting is overseen by accounting firms namely big four - Klynveld Peat Marwick Goerdeler (KPMG), PricewaterhouseCoopers (PwC), Ernst & Young, Deloitte and non-big four, Accountability principles and International Federation of Accountants (IFAC) and other consultants who are not accounting firms.

The Global Reporting Initiative (GRI) is a leading organization in the field of corporate reporting poised with a mission to promote the use of sustainability reporting by government, business and not-for-profit organizations; thereby contributing to sustainable development. The latest reporting principles and standard disclosures of the GRI (G4) were issued in July 2013 (GRI, 2013). Previous guidelines are the G3.1 (issued in 2011), G3 (issued in 2006), G2 (issued in 2002) and the 2000 guidelines. The G3.1 guidelines issued in 2011 classify the standard sustainability disclosures along three lines namely strategy and profile, management approach and performance indicators. Based on Global Reporting Initiative (2011), organizations are supposed to declare the level to which they adhere to the guidelines when they report.

2.3 Theoretical Framework

The most widely advanced theoretical perspectives in the sustainability reporting/environmental accounting literature is the legitimacy theory.

Legitimacy theory is derived from political economy theory and relies on the idea that the legitimacy of a company to operate in a society depends on an implicit social contract between the company and society. As described by Deegan (2000), the legitimacy theory is of the view that organizations continually seek to ensure that they operate within the bounds and norms of their respective societies, that is, they attempt to ensure that their activities are perceived by outside parties as being legitimate. Managers continually attempt to ensure that their company complies with its social contract by operating within society's expectations. This suggests that managers have incentives to disclose information that indicates that the company is not in breach of the norms and expectations of society. Therefore, the company attempts to maintain its survival and continuity by voluntarily disclosing detailed information to society to prove it is a good citizen.

2.4 Empirical Evidences

Uwuigbe, et al. (2018), examined the relationship between sustainability reporting and firm performance in quoted Deposit Money Banks (DMBs) in Nigeria. The population size of the study comprised of all deposit money banks quoted on the floor of the Nigerian Stock Exchange, the study used judgmental sampling technique to select the sampled banks for the period 2014-2016. The annual reports of the selected banks were analyzed through the use of content analysis and coded in order to obtain the sustainability disclosure index. The panel regression technique was used to analyze the data. The findings revealed that there is a bi-directional relationship between sustainability reporting and firm performance of quoted Deposit Money Banks (DMBs) in Nigeria. The study observed that the market price per share of the samples firms had a significant negative influence on sustainability reporting. In addition, the study also showed that sustainability reporting had a significant positive influence on revenue generation of the sampled firms.

Asquo, Dada and Onyeogaziri (2018), examined the effect of sustainability reporting on corporate performance of selected quoted brewery firms in Nigeria. To determine the association between sustainability reporting and corporate performance, data was obtained from the audited financial statements of the three brewery firms under study for a period of five years (2012-2016). The result of the study showed that Economic Performance disclosure (ECN), Environmental Performance disclosure (ENV) and Social Performance disclosure (SOC) had no significant effect on return on asset (ROA) of selected quoted firms in Nigeria.

Owolabi, Taleatu, Adetula and Uwuigbe (2016), examined the extent of sustainability reporting practised by Lafarge Africa Plc. Content analysis was used to analyze the data extracted from their annual reports and the Global Reporting Initiative (GRI) G4 sustainability reporting guideline was used as the basis of assessment. The study found no disclosures on human rights issues, 3% environmental disclosures and an aggregate of 30% disclosure based on one hundred and sixty-nine indicators used. The study concluded that Lafarge Africa Plc exhibited some level of sustainability reporting, however, the extent of

reporting was still below average which suggests there is much work to be done to improve this practice in order to become more transparent and accountable to its stakeholders.

Nnamani, Onyekwelu and Ugwu (2017), evaluated the effect of sustainability accounting on the financial performance of listed manufacturing firms in Nigeria. Firms used for the study were chosen from the Nigerian brewery sector. Data were sourced from the financial statements of three sampled firms. Data were analysed using the ordinary linear regression. The study reveals that sustainability reporting has positive and significant effect on financial performance of firms studied.

Nwaiwu and Oluka (2018), empirically examined the effect of environmental cost disclosure and financial performance measures of quoted oil and gas companies in Nigeria. Time series data were collected from annual financial reporting and economic review of the Central Bank of Nigeria; Pearson product moment coefficient of correlation and multiple linear regression analysis with the aid of special package for social sciences (SPSS) version 22 were used. The econometric results reviewed adequate disclosure on environmental cost, compliance to corporate environmental regulations have positive significant effect on financial performance measures.

3. Methodology

3.1 Model Specification

Model specification for this study is derived from the research efforts of previous contributors in the area of study, which is on the relationship between sustainability reporting and corporate performance. The procedure is in line with the approach adopted by Enahor (2009) given by:

The model specified for this study is specified as follows:

$$EQR = a_0 + a_1EOPEX + a_2ECAPEX + a_3COTEC + a_4PODET + a_5POPREV + a_6EEXTC + \varepsilon \dots\dots\dots 1$$

However, the model adopted for this study is re-modified with the inclusion of Cost of Environmental Remediation and Pollution Control and Cost of Environmental Law Compliance because they involve cost of cleaning up or sustainability reporting which can be written in form as:

$$CPRF = f(CDC, CERPC) \dots\dots\dots 2$$

$$ROE_{it} = \alpha + \beta_1CDC_{it} + \beta_2CERPC_{it} + \mu_{it} \dots\dots\dots 3$$

Where:

ROE = Return on Equity

CDC = Community Development Cost

CERPC = Cost of Environmental Remediation and Pollution Control

α = the intercept/constant;

$\beta_1 - \beta_2$ = are the parameters;

μ = error term

i = Number of firms

t = Time period 8years (2010-2017)

A priori expectation is that β_1 , and $\beta_2 > 0$

Decision rule: null hypothesis should be rejected if the prob (p-value) is < 5% significance level, otherwise it should be accepted.

3.2 Research Design

In this study, the researcher adopted the panel design because the study was carried out on a group of manufacturing firms (cross sectional units) and for more than a year (time series). For the purpose of this study, the target population was the 69 quoted manufacturing firms on the Nigerian Stock Exchange (NSE), and reclassified into five subsectors which were (food, beverages, conglomerate, building material, construction) where the study obtained data from a sample of 10 firms ranged 2010 to 2017 to the extent of data that was available using random sampling technique.

3.3 Sources and Method of Data Collection

The study used data mainly from secondary sources because the estimation of the model employed in the study requires the use of data in the form of financial and market information. In this regard, the sources of data for the study were the Nigerian Stock Exchange Fact Books, annual reports and accounts of the companies for the year 2010 to 2017 covered by the study.

3.4 Population and Sampling Procedure

The sample focused exclusively on ten (10) selected manufacturing firms within the sector as classified by the Nigerian Stock Exchange and the Corporate Affairs Commission using random sampling techniques out of the sixty nine (69) quoted manufacturing companies. These companies have the required data needed for this study in their annual reports and have filed their annual report within the last eight years (2010-2017). This restriction placed a limit on the number of firms qualified for the study. The empirical study is therefore of ten (10) randomly selected quoted manufacturing companies in Nigeria.

Manufacturing companies were chosen for this study because of the environmental and social effects which some of their operations have on the environment. In addition, these companies were amenable to the regulations and also their activities had caused armed confrontations in the area in which they operated.

3.5 Technique of Data Analysis

This study employed the multivariate technique to analyse the data. The model uses multiple dependent variables: Return on Equity and two explanatory variables, Community Development Cost (CDC) and Cost of Environmental Remediation and Pollution Control (CERPC). The basic aims of the multiple regression model in this study is to investigate empirically if any relationship existed between Corporate Sustainability reporting (environmental accounting) of manufacturing companies and their performance in Nigeria. More specifically, the multiple regression model assesses the aggregate impact of the three explanatory variables on corporate financial performance. The model was estimated using the coefficients of the independent variables and their level of significance.

3.6 Measurement of Variables

Return on Equity (ROE): This is a test of profitability based on investments of the owners of a business. It measures the return which accrues to the shareholders after interest payments and taxes are deducted. This is one of the proxies for financial performance. Stock investors usually use ROE in analyzing stock. This is computed for common shareholders as Net Income divided by Shareholder's Equity multiply by hundred percent.

Community Development Cost: This involves donations/ contributions to the community where they operate. These costs may include scholarships, building of modern class room for student, organizing youth entrepreneurship programmes, disaster relief, provision of boreholes and so on. This is a proxy of environmental accounting cost.

Cost of Environmental Remediation and Pollution Control: These are the cost of removing pollution or contaminants from environmental media such as soil, groundwater, sediment, or surface water which can impact negatively on human health and the environment where such company operates. This is a proxy of environmental accounting cost.

4. Analysis and Discussion of Results

Data for this study was presented and analyzed using the correlation matrix, multicollinearity test to test the individual difference among the cross-sectional data while panel regression analysis was adopted in the test of hypothesis of the study.

Table 4.1: Correlation Matrix

	ROE	CDC	CERPC
ROE	1.0000		
CDC	0.0630	1.0000	
CERPC	-0.1259	0.2465	1.0000

Source: Author's Computations, (2019).

Table 4.1 presents the correlation matrix of the dependent and independent variables of this study. The essence of this is to measure the linear relationship between these variables (ROE, CDC, and CERPC). This correlation matrix reflects the relative strength of the linear relationship between these variables. According to Gujarati (2004), multi-collinearity could only be a problem if the pair-wise correlation coefficient among regressors is above 0.80. However, it is obvious that the variables in table 4.1 are orthogonal (statistically independent) and do not pose correlation concern for the study.

Table 4.2: Variance Inflation Factor

Variable	VIF	1/VIF
CERPC	1.13	0.8871
CDC	1.07	0.9371
Mean VIF	1.06	

Source: Author's Computations, (2019)

It is an implicit assumption when using the panel least square estimation method that the exogenous variables are not perfectly correlated or near perfect correlation with one another. If there is no relationship between the explanatory variables, they would be said to be orthogonal to one another. Hence, Table 4.2 displays the relationship between the

independent variables of this study with the aid of variance inflation factor (VIF). The result indicated absence of multicollinearity among these variables as indicated by VIF of each variable falling below 10, and the average VIF is also less than 10.

Table 4.3: Panel Result: Sustainability Reporting and Return on Equity

Variable	Coefficient	Std. Error	t-Statistic
C	-4.410650	0.704061	-6.264580
CDC	0.485151	0.104364	4.648661
CERPC	0.050046	0.011157	3.052279
Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.991609	Mean dependent var	
Adjusted R-squared	0.989180	S.D. dependent var	
S.E. of regression	0.075524	Akaike info criterion	
Sum squared resid	0.216749	Schwarz criterion	
Log likelihood	65.07900	Hannan-Quinn criter.	
F-statistic	408.2235	Durbin-Watson stat	
Prob(F-statistic)	0.000000		

Source: Author's Computations 2019

Panel 1 shows the linear relationship between sustainability reporting and return on equity (ROE) of manufacturing firms in Nigeria with the use of multiple panel regression analysis. The results obtained from the static model indicates that the overall coefficient of determination R-squared (R^2) shows that the equation has a good fit with 99.2 percent of profitability is explained by the variables in the equation. This result means that R^2 is highly significant in terms of the goodness of fit.

In terms of the signs and magnitude of the coefficients which signify the sustainability reporting and return on equity, it can be seen that the variables CDC and CERPC concur with *a priori* expectation; with positive sign. This means that both variables CDC and CERPC have direct relationship with return on equity.

The significant coefficients of CDC and CERPC exogenous variable clearly have positive significant effect on return on equity as indicate by coefficients (0.4852 and 0.0500) prob (0.0000 and 0.0036) respectively at 5% level of significant. This means that 1% increase in CDC, will result in 0.4852% increase in return on equity, and also 1% increase in CDC, will result in 0.05% increase in return on equity. Overall, the result of the F-statistic revealed that sustainability reporting have significant effect on the return on equity of quoted manufacturing firms in Nigeria as indicates by F-stat 408.2 and prob (F-stat) 0.0000 at 5% significance level.

5. Conclusion and Recommendations

The study examined the relationship between sustainability reporting and corporate performance of quoted manufacturing firms in Nigeria and found that there is positive and significant relationship between sustainability reporting and corporate performance. However, the extent of reporting is still evolving which suggests there is much work to be

done to improve on this practice (sustainability reporting) in order to become more transparent and accountable to shareholders.

From the findings and conclusion reached in this study, the following recommendations are suggested: that management of manufacturing firms should increase their participation in CDC to their host communities in order to guarantee a conflict free operation atmosphere needed by managers, customers, employees and interested parties for maximum productivity/profitability. Also, management of manufacturing firms should develop a positive disposition towards CERPC friendly practice in order to restore and guarantee stable and smooth operations. This will in turn improve the performance of their respective companies and employees with a view to attain optimal yield level in the future.

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Organizational Culture of Discipline and Efficiency Narrative in the Nigerian Public Sector: Revisiting McGregor Theory X and Y

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Abstract

Efficiency in the delivery of public goods and services has remained a recurring decimal in the Nigerian public service discourse. Preponderance of ineptitude, laziness, lack of productivity and corruption in the service have among other problems been identified in the literature as the bane of organizational culture of discipline in the public service despite the myriad of the reforms in the sector. This paper therefore focuses on the issues by revisiting the McGregor theories X and Y as the basis for understanding the culture of discipline that should change the efficiency narrative. The work generates qualitative data from the literature explored. Desk analysis of the data was done. It concludes, among other things, that Western scholars' postulation of preference of theory Y as being capable of bringing about efficiency in organizations failed to consider the negatives that inhibit public sector efficiency which theory X has capabilities of addressing especially in transition economies and less advanced democracies like Nigeria. It equally recommended, among others, strict adherence to discipline and deterrence in order to curtail the excesses of deviants as espoused by theory X while initiatives and positive self-direction of the productive ones should be encouraged maximally in tandem with the dictates of theory Y.

Keywords: Organization, Culture, Discipline, Efficiency, Public Service

JEL Classification: G14, M14, D46,

1. Introduction

Organizational culture is a widely used term but one that seems to give rise to a degree of ambiguity in terms of assessing its effectiveness on change variables in an organization. For the past decades, most academics and practitioners studying organizations suggest the concept of culture is the climate and practices that organizations develop around their handling of people (Schein, 2004). Watson (2006) emphasizes that an important trend in managerial thinking in recent decades has been one of encouraging managers to try to create strong organizational cultures. Schein (2004) suggests that culture and leadership are conceptually intertwined. This is supported by O'Farrell (2006) in his analysis of the Australian public service, where he concludes that 'statements of values, codes of conduct,

principles of public service management and so on set out in rules and regulation are simply rhetoric - or what we now call inspirational statements. Without leadership that is what they will ever be rhetoric. It is our job as administrators, managers and leaders to turn them into reality' (O'Farrell, 2006. p.8).

Organizations, in any context, are made up of groups of people and individuals who are interdependent, and work together to achieve organizational goals and objectives. Therefore, these people interact with one another on a daily basis to fulfill their job-roles and to contribute effectively to their organizations. However, individuals enter the workplace with their unique abilities, attitudes, values and perceptions, and this in itself can be a source of conflict in any organization (Knight & Ukpere, 2014). In the same vein, in a formal organization or establishment, as a result of conflicting interests, and acquisitive nature of some people, the behavioural attitudes of such people is deviant from the ethos, rules and regulation of the organization. Needless to say, a fair degree of predictable behavior is needed from individual(s) for the achievement of organizational goals and objectives. One of the means in ensuring decorum, progress and effectiveness in an organization is discipline. Where there are no proper disciplinary procedures for erring officers there will be a dislocation of effective organizational functionality.

Discipline in a broad sense is conceptualised as orderliness, the opposite of confusion. In a narrow sense, discipline refers to employee discipline, which is an important function of personnel management. The definition that captures all other definitions of discipline and which would be adopted for the purpose of this study is that of Heiman and Hilgert (1977). To them, discipline refers to "...a state of affairs – a condition in an enterprise in which there is orderliness, in which the members of the enterprise behave sensibly and conduct themselves according to standards of acceptable behaviour as related to the organization". Thus discipline from this perspective can be seen as a state of orderliness by which employees conduct themselves according to the laid down rules and regulation of an organization.

The effectiveness and performance of the public service depends on the existence of a systematic and well established disciplinary procedure. It involves sanctioning erring employees and rewarding conforming employees. Discipline is considered to be good when employees willingly conform to rules and regulation in an organization. It is bad when employees either follow the rules reluctantly or deliberately violate them. Poor discipline normally indicates the need for corrective action. Such action aimed at inhibiting undesirable behaviour in an employee is known as disciplinary action.

1.1 Statement of the Problem

The public service at independence has been described as one of the most enduring legacies bequeathed to Nigeria by her erstwhile colonial masters (Adamolekun, 2004 cited in Mustapha, 2017). The sustenance of the legacy as agencies of development administration was ensured and demonstrated in the various Regional civil services especially that of the South-West Nigeria. Credence was given to the assertion in the valedictory address by the then out-going Premier of the Region, Chief Obafemi Awolowo to the Western Nigeria House of Assembly in 1959 who inter alia attributed the success of the government to the virile civil service that according to him was "... exceedingly efficient, absolutely

incorruptible in its upper stratum, and utterly devoted and unstinting in the discharge of its many onerous duties...” (Mustapha, 2017: 56).

All these sterling characteristics and organizational culture of discipline and efficiency have long disappeared from the Nigerian public service. In contrast, they have been replaced with the culture of bribery and corruption; high rate of indiscipline; inefficiency; nepotism and favoritism; poor attitude to work; slothfulness, etc.

At the heart of all abnormalities bedeviling the public service is the issue of indiscipline and its development as a culture of the Nigerian public service. This paper therefore interrogates the adequacy of the institutional framework for culture of discipline and the relatedness of that to the application of McGregor theory X and Y to reverse the ugly trend in order to bring about a positive twist and a reversal in the current narratives of corruption, indiscipline and inefficiency that pervade the Nigerian public service.

1.2 Objectives of the Study

1. To examine the nature of the organizational culture of discipline in the Nigerian Public Service.
2. To assess the performance of the Nigerian public service in the context of the efficiency narrative.
3. To assess the provisions of the Douglas McGregor theory X and Y and its application to discipline in the Nigerian public service.

1.3 Research Questions

1. What is the nature of the organizational culture of discipline in the Nigerian public service?
2. What is the performance of the Nigerian public service in the context of the efficiency narrative?
3. What are the provisions of the Douglas McGregor theory X and Y, and to what extent can the theories be applied to establish and sustain the organizational culture of discipline in the Nigeria Public service?

2. Literature Review

2.1 Conceptual Clarifications

Some concepts used in the study are defined for clarification. These concepts include the following;

2.1.1 Organisational Culture: Organisational culture is a widely used term but one that seems to give rise to a degree of ambiguity. Watson (2006) emphasizes that the concept of culture is originally derived from a metaphor of the organization as ‘something cultivated’. For the past number of decades, most academics and practitioners studying organisations suggest the concept of culture is the climate and practices that organisations develop around their handling of people, or to the promoted values and statement of beliefs of an organisation (Schein, 2004). Schein (2004) highlights that ‘the only thing of real importance that leaders do is to create and manage culture; that the unique talent of leaders is their ability to understand and work with culture; and that it is an ultimate act of leadership to destroy culture when it is viewed as dysfunctional’ (Schein, 2004).

Culture, therefore, gives organisations a sense of identity and determines, through the organization's legends, rituals, beliefs, meanings, values, norms and language, the way in which 'things are done around here'. An organizations' culture encapsulates what it has been good at and what has worked in the past. These practices can often be accepted without question by long-serving members of an organisation. One of the first things a new employee learns is some of the organization's legends. Legends can stay with an organisation and become part of the established way of doing things. Over time the organisation will develop 'norms' i.e. established (normal) expected behaviour patterns within the organisation. A norm is defined as an established behaviour pattern that is part of a culture.

2.1.2 Discipline: Discipline is understood differently by people. While some people view it as a punitive measure or chastisement, which generates fear, reproach when one is involved in a wrongful act, others look at it as orderliness and conformity to rules and regulations, etc. In order to clarify these differences in view or notion of people, an attempt will be made in this section to explain the concept of discipline with the help of definitions of some authorities and explanation by the writer on the subject.

Knight (2014), defines discipline as a pattern of behavior which can be traced back from a particular training. This behaviour is portrayed by a person in order to demonstrate his personal traits. An employee, for example, reflects a particular behaviour in a workplace situation and his behavior contributes towards attaining his or her goal at the organization. Dumisan, (2002) defines discipline as a system of rules and mechanism for ensuring that disciplinary codes are followed. This implies that every organization has its rules and regulation "dos and don'ts". Observance of these sets of rules in itself is discipline.

In the view of Ajumogobia (2007), in a seminar presentation, he asserts that discipline in the work place does not mean strict and technical observance of rules and regulations for survival of the organizational system. Rather, it implies a situation where workers are expected to cooperate and behave in a normal and orderly way, as any reasonable person would expect an employee to do. This has become imperative since the goal of every organization or establishment is to enhance workers' satisfaction that would lead to higher productivity and profitability. This can only be realized where there are sets of rules and regulations that would govern the conduct of people at work. The absence of these rules and regulations will lead to anarchy, workers dissatisfaction which is antithetical to the basic principles that informed the establishment of such an organization in the first place. Workers who display unethical behaviour are capable of infesting others with good morals (Vonai, 2013).

3. Methodology

This paper is essentially exploratory and so it relies basically on secondary sources of data. Desk analyses of the issues generated from the secondary materials were done on the bases of which our conclusions were drawn and our recommendations made.

3.1 Theoretical Underpinning

Theory X and Theory Y was an idea devised by Douglas McGregor in his book “The Human Side of Enterprise” (1960). It encapsulated a fundamental distinction between management styles and has formed the basis for much subsequent writing on the subject.

In the first few decades of the 20th century Theory X was the style that predominated in business after the mechanistic system of scientific management had swept everything away. Theory X is an authoritarian style where the emphasis is on “productivity, on the concept of a fair day's work, on the evils of feather-bedding and restriction of output, on rewards for performance (Tim Hindle, 2003). Latterly, Theory X has been considered as a negative way of dealing with employees. In this theory, it is assumed that employees are, by nature, reluctant to fulfill the obligations of their job and instead will find ways to avoid work or otherwise reduce their work output in a bid to expend the least amount of effort possible. When there are more motivated management staff and owners urge the employees into making them work, the company will be successful and have productive employees as conceived by Theory X. In order to detect attempts by staff to avoid work it demands a strict control and monitoring of behavior. The authority must keep a careful eye out for sabotaging effects by self-interested employees and find the cause of disruptions, handing out penalties in the belief that a sincere wish to avoid responsibility is the root cause for majority of trouble.

Theory Y is a participative style of management which “assumes that people will exercise self-direction and self-control in achievement of organizational objectives to the degree that they are committed to those objectives”. It is management's main task in such a system to maximize that commitment (Tim Hindle, 2003). In many ways, Theory Y is, the diverse to that of Theory X. Rather than taking the view that employees must be forced to do what management want and that they will not, under any circumstances, do anything beneficial for the company under their own direction, Theory Y states that employees actually become more productive when more trust and responsibility is delegated to them. According to Theory Y, employees do wish to work and be productive and the act of doing well at work is itself a strong motivator. Moreover, if the employee's will seek responsibility and ways to be productive, if they are allowed to do so. Regarding to Charles M. Carson, (2005), McGregor theory Y stands in a unique place in management history and advocated a heightened awareness of management's responsibility for the human side of employer-employee relations.

4. The Nigeria Public Service

The public service refers to all organizations that exist as part of government machinery for implementing policy decisions and delivering services that are of value to citizens. Ezeani (2006:190) refers to public service as the administrative machine within which the work of government is carried out. It is a mandatory institution under the Nigerian Constitution of 1999. Chapter VI of the Constitution, Executive, Part I (D) and Part II (C) provide for a public service at the federal and state levels of government. The Public Service in Nigeria is made up of the following: (1) The Public Service, which is often referred to as the core service and is composed of line ministries and extra-ministerial agencies; and (2) The Public Bureaucracy, which is composed of the enlarged public service, including the following: (a) Services of the State and National Assemblies; (b) The Judiciary; (c) The Armed Forces; (d)

The Police and other Security Agencies; (e) Paramilitary services (Immigration, Customs, Prisons, etc); (f) 'Parastatals' and agencies including social service, commercially oriented agencies, regulatory agencies, educational institutions, research institutes, etc. (Reichheld and Sasser 1990:107)

The contemporary public service system in Nigeria originated from British colonial administration. According to Nigerian public administration scholars (Okoli 1980; Adamolekun, 1986; Adeosun, 2012), British Colonialists under the leadership of Lord Lugard administratively unified the then Northern and Southern protectorates including the Lagos colony in 1914 as a part of the colonial service. The Europeans vested themselves with all the executive, judicial, and legislative powers and later incorporated traditional rulers into the power structure through a system of indirect rule. To solve the problems in the implementation of a centralized budgetary system, the three regional governance structures were created in 1946 along with a revenue commission. These regions, in turn, created their own public services following the adoption of a federal system in 1954 and the creation of a public service commission at the center. At independence in 1960, both the federal and regional services coalesced in advancing the establishment of a career public service within their jurisdictions (Anazodo, 2009).

In October 1963, Nigeria adopted a new constitution and proclaimed itself as a federal republic. Moreover, it altered the British sphere of influence in the country, and in the same year created a fourth region, the Midwest. Although, the public service that emerged after independence became more involved in formulating and executing public programmes and economic development policies, the unequal distribution of political power on the basis of ethnicity, and regional composition resulted in uneven socio-economic development. This is because both the elected and appointed government officials were more interested in bringing home the bacon to their respective regions. The politics of regional affiliation has deprived Nigeria of a national character and a sense of national interest as well as brought other issues such as zoning federal character and quota system into the lexicon of Nigerian public service (Mukoro, 2005).

The socio-economic problems of Nigeria in the 1960s may be seen as the consequences of weak federal and strong regional governments (Adamolekun and Ayo,1989); the regional public services provided better opportunities for development than the national government. These issues had compelled every regime since post-independence to experiment with different types of public service reforms or government organizational restructuring measures. In its 2010 report, the United Nations Economic Commission for Africa acknowledged that Nigerian public service system has experienced three political influences, the colonial, military and politician. Each of these provided distinct legacies (Omitola, 2012).

Political neutrality, anonymity and impartiality, for instance, are attributes transmitted from colonial rule. Some of these transmitted attributes were not retained under the military governments. For example, there was a clear absence of the colonial legacy because higher public servants, as confidential advisers to ministers dominated the public policy making process between 1967 and 1975, whereas the role of public servants became irrelevant

between 1975 and 1979 (Adamolekun, 1986, Adebayo 1994 and United Nations Economic Commission for Africa, 2010).

Moreover, between 1979 and 1983, the government experienced shifts from military to civilian rule and between 1984 and 1999, the Nigerian public service system operated under military regimes that culminated in the series of public service reforms which have affected the structure and operation of Nigeria public service system up to the recent times.

It is obvious that Nigeria has a large public service running into millions of personnel. Their major function is to implement government policies and programs. While it is true that some governments did (do?) not have any programs for the common good, the public service has not successfully implemented the policies and programs of those that did. Many public servants found it easier to align themselves with government of the day and participate in treasury looting that has reduced Nigeria to an embarrassment among the comity of serious nations. Okpala (2012:114) reported that Nigeria lost several hundred billions of Naira over the last few decades due to flagrant abuse of procedures, lack of transparency and merit in the award of contracts in the public service.

The public service in Nigeria exists to propel socio-economic development and to guard against control of the economy from foreign domination and exploitation but, the performance of the service has been replete with varying contradictions (Adeyemo and Salami, 2008). As noted by Chukwuemeka and Eme (2011), the public service in Nigeria for example, seems to be unable to cope with the prevailing ideological, political and economic changes as well as management innovations such that the institutional weakness of the public service is considered one of the fundamental causes of socio-political upheavals and economic crisis in Nigeria.

4.1 The Institutional Framework for Culture of Discipline in the Nigeria Public Service

The public service is the machinery that government uses to render services to the people and as such, public servants are expected to constantly improve themselves to give better service. The process of rendering of these services must conform to the prescribed code of conduct provided by the Constitution of the Federal Republic of Nigeria. Thus the said constitution has established thresholds that would guide a public servant in the discharge of his or her duties. Part I of the fifth schedule of the 1999 Constitution (As amended) has generally made provision in respect of code of conduct and work attitude for a public servant. Section 1 provides that 'a public officer shall not put himself in a position where his personal interest conflicts with his duties and responsibilities' (Junaidu and Aminu, 2015). This duty is an aspect of the common law duty to act in good faith. Sometimes in the course of his official duty, a public officer may experience a situation where his personal interest is in conflict with his duty. In such a situation, the public officer would be in breach of the code of conduct if he allows his personal interest to take precedence.

Public Service Rules (PSR) is another major institutional instrument which refers to a set of laws guiding the conduct of public servants for effective and efficient performance of their jobs. Included in the PSR are conditions of service for public servants (Okonkwo, 2009). The PSR in Nigeria have undergone many changes in nomenclature right from the colonial days to the present. It started as General Orders (G.Os) instituted by the colonial masters.

Before independence, the G.Os served as guide for all government employees in Government Departments and Agencies. Immediately after independence, the name changed again to Civil Service Rules, and later to the present title of Public Service Rules (Mustapha, 2008). The present title is adopted to make the rules have general application to all manner of government employees in Ministries, Departments and Agencies (MDAs). The public service is generic and broader in nature than civil service which is restricted to personnel of core government Ministries only. Thus, all civil servants are public servants but not all public servants are civil servants.

According to Okonkwo (2014), practically, the PSR refers to a code of regulations which provides for basic rules, regulations and procedures that are germane for carrying out the business of government geared towards efficient service delivery. Consequently, it is expected that every public servant should strictly comply with the provisions of the rules. The overall aim of the PSR is to ensure good conduct, loyalty, honesty, courtesy, hard work and ethical principles. The PSR covers a wide range of issues which include discipline.

The PSR (2007) as reviewed captures the importance of discipline. Discipline according to the PSR generally refers to good conduct and behaviour. Anything contrary to this becomes indiscipline. Act of indiscipline in the public service has been broadly classified into two – misconduct and serious misconduct. Rule 030301 of the PSR defines misconduct as any act of wrong doing or an improper behaviour which is inimical to the image of the Service and which can be investigated and proved. It can also lead to termination and compulsory retirement. Gross or Serious Misconduct, on the other hand, is a specific act of very serious wrongdoing and improper behaviour which is inimical to the image of the Service and which can be investigated and if proved, may lead to dismissal. There are many examples of misconduct and serious misconduct given in the PSR. A few worth mentioning include scandalous conducts such as; immoral behavior, drunkenness, refusal to proceed on reposting or to accept posting, habitual lateness to work, deliberate delay in treating official document, unauthorized removal of public records, membership of cults, sleeping on duty, improper dressing, hawking merchandise within office premises, malingering, insubordination in order to avoid work, discourteous behaviour to the public. Furthermore, conducts classified as serious misconducts include; falsification of records, conviction on a criminal charge, false claims against government officials, engaging in partisan political activities, unauthorized disclosure of official information, bribery, corruption, divided loyalty, sabotage, willful damage to public property and sexual harassment.

Following from the above, the public service rules provided for disciplinary procedures to be taken. It states under rule 030302 that if a senior officer notices any of the misconduct, they should issue the staff involved with a query in writing, and request the staff to submit a response within a specific time, and as regards serious misconducts Rule 030407 made provisions that the ultimate penalty for serious misconduct is dismissal, and an officer who is dismissed forfeits all claims of retiring benefits, leave or transport grant, which is subject to the provision of the Pension Reform Act 2004. Reinforcing the institutional framework for culture of discipline provided by the Constitution and the PSR are the Financial Regulations, Fiscal Responsibility Act, etc. The foregoing explicates the institutional framework for ensuring discipline in the public service which can be said to be in tandem

with the dictates of the Mc Gregory theory X on discipline and disciplinary procedures. If the deviants are provided for institutionally to ensure they are disciplined, the whole arrangement becomes more holistic by the time the theory Y is applied as a necessary counterpoise in cultivating a well balanced organizational culture of discipline in the public service.

4.2 The Efficiency Narrative and the Nigeria Public Service Performance

The debate on the role of the state has shifted in recent years towards empirical assessments of the efficiency and usefulness of public sector activities. A growing academic literature has been investigating the stabilization, allocation and distribution effects of public expenditure. It has also been assessing the role of rules and institutions and the scope for privatizing public sector activities (Gwartney et al., 2002; Mueller, 1997; Persson & Tabellini, 2001; Rodrik, 2000; Shleifer & Vishny, 1998; Strauch & Von Hagen, 2000; Tanzi & Schuknecht, 1997, 2000). Most studies conclude that public spending could be much smaller and more efficient than it is today especially in the developing and transition economies. However, for this to happen, governments should adopt better institutions and should transfer many non-core activities to the private sector (Diana et al, 2010). This assertion is associated mainly with neo-liberal reformists' position about public sector organizations.

The Nigerian public service has undergone a number of reforms in the past decades in conformity with the neo-liberal reformists' dictates with the aim of enhancing, improving and sustaining its efficiency and effectiveness. The mission of these reforms was to build a public service that is performance and result-oriented, customer-driven, investor friendly, professionally and technologically sensitive, accountable, fostering partnerships with all stakeholders and committed to a continuous improvement in government business and enhancement of overall national productivity. The vision is (was) to have "a Nigerian public service that works efficiently and effectively for the people" (Oronsaye, 2009). However, in recent times, the public service has failed in its numerous duties impeding on her efficient delivery of basic services to the Nigerian populace. The reasons for this are not far-fetched as there appears to have been a detachment of the government bureaucracy from the fundamental organizational culture of discipline necessary for running of an efficient public service.

4.3 The Douglas McGregor Theory X and Y and Discipline in the Nigerian Public Service: A Theoretical Application

More than forty years ago, Miner (2003) surveyed subject matter experts (past presidents of the Academy of Management and editors and journal review board members of two prominent publications, AMJ and AMR), to ascertain their familiarity with and their rated importance of 73 organizational behavior theories. Miner (2003) found that McGregor's Theory X and Theory Y was tied for second place as the most well-known theory in organizational behavior out of the universe of 73 theories.

In a nutshell, according to McGregor: "Man is a wanting animal and as soon as one of his needs is satisfied, another appears in its place. McGregor urged companies to adopt Theory Y. Only it, he believed, could motivate human beings to the highest levels of achievement while maintaining organisation culture of discipline. Theory X merely satisfied their lower-

level physical needs and could not hope to be as productive. McGregor's postulation explains the situation in advanced countries. It fails to a huge extent to account for organisational behaviour in developing countries transition economies. As observed in Nigeria, managements, especially in the public sector, tend to be at a crossroad on what leadership technique to adopt in sustaining the organisation culture of discipline in their institutions. Organizations with a Theory X approach have several levels of managers and supervisors to oversee and direct workers. Authority is rarely delegated in the strict sense of it, and control remains firmly centralized. Managers are more authoritarian and actively intervene to get things done. Although Theory X management has largely fallen out of fashion in recent times, big organizations may find that adopting it is unavoidable due to the sheer number of people, also the primordial culture of discipline dominate in many citizens of Nigeria and the tight deadlines that they have to meet (McGregor 1967, Miner 2003, Oronsaye, 2009).

The theory X provides a clear lay out of rules and punishments which follow disobedience of these rules. An effective application of theory X would ensure that employees follow these rules and regulations in any organization. In Nigeria taking into account the environment factors and the attitude of workers in the country, Chukwuemeka and Eme (2011), describe the Public servants in Nigeria as lazy, unaccountable, indisciplined and lackadaisical. Following suit, Okwudili (2015) explained that the average public servant lacks commitment to work and would only perform effectively if closely supervised. Drawing from the above scholars' postulation, it can be deduced that the theory X approach when applied would ensure efficiency in the public service.

5. Conclusions and Recommendation

5.1 Conclusions

The Nigeria public service has a sound documented institutional framework consistent with the McGregor Theory X nuances for organizational discipline. But there appears to be a divergence between documentation and practical application of the document over time that eventually translate to a culture of the organization. Were there to be a match between the preponderance of framework of discipline such as the PSR, Financial Regulations, Public Procurement Act, Fiscal Responsibility Act and various other extant circulars relating to establishment and development of culture of discipline, our public service would not have been disreputed for the rot it suffers today.

Contrary to the relevant and extant institutional framework for maintenance of discipline, deterrence is hardly noticed and consequently corruption and other forms of act prejudicial to maintaining the culture of discipline have become systemic.

Western scholars who posit a preference of the adoption of Theory Y to Theory X in the maintenance of organizational culture of discipline do so without consideration to societies in transition that are still battling with primordial factors that hinder their institutional effectiveness. Inhibitive factors such as ethnicity, religious bigotry, nepotism, sectionalism, quota system without regard to merit, political patronage, 'god-fatherism', etc, still pervade and hinder the establishment of culture of discipline in the Nigeria public service and so, Theory X is what is more relevant to the building of a virile public service.

Further to that, it can be deduced that Theory Y becomes more relevant when all the encumbrances that are supposed to be taken care of by Theory X have virtually disappeared and near complete sanity has been achieved. The protection and sustenance of sanity reigns when the individual in an organization is already conscious of the consequences of his or her aberrant behaviours and the full weight of the law comes down on deviants. No organization that hopes to achieve its core mandate will completely do away with Theory X. Even when it has adopted Theory Y as its operational philosophy, the total jettisoning of Theory X would be abnormal as it will amount to concluding that the public service is populated by perfect human beings. To have a service where well-behaved workers are given opportunity of self direction and control, the instruments to keep the deviants in check should also be kept alive and functional.

5.2 Recommendations

In view of the foregoing conclusions, the following are recommended.

- i. First, orientation should be given to new entrants into the public service on the mandate of the service and the instruments put in place to achieve the goals including that of maintaining the culture of discipline. They should be exposed to the various institutional documents notably the PSR, the Public Procurement Act, the Financial Regulations, Fiscal Responsibility Act and extant circulars relating to their conduct in the service. This would afford them adequate information about the service especially where they have had negative orientation that public service job is no man's business and it is an avenue to acquire wealth as quickly as possible. Copies of the documents should also be made available to all staff.
- ii. Secondly, there should be complete maintenance of discipline. This is multi-dimensional. The core of it is adherence to the provisions of our institutional documents such as the PSR, Financial Regulations, Public Procurement Act, Fiscal Responsibility Act etc especially in the aspect of punishment and deterrence. This is without prejudice to encouraging the good hands to exercise their initiatives and positive self-direction that could lead to building a virile public service. This ultimately is a combination of the postulates of both Theories X and Y.
- iii. Thirdly, is exemplary leadership. Since culture is essentially transmitted from old to the younger generations, the role of the leadership in the public service cannot be over-emphasized. Where those who constitute the administrative elite are bastion of corruption, transmitting the desirable culture of organizational discipline to their subordinates, who look up to them for guidance, becomes an impossible task.
- iv. Lastly, it is also highly recommended that trade unions in the public service should be carried along in the task of establishing and sustaining the culture of discipline. This is so because the power exerted by workers' unions in limiting the management discretion when it comes to the issue of punishment and deterrence is so enormous. One of the primary duties of a responsible Union is to protect its members especially against punishments that, in consideration of the Union, are unjustifiable. But when the Unions are part and parcel of disciplinary process and they are made to participate actively in protecting the service through instilling discipline, they will not provide a hiding place for an indolent and irresponsible officer.

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The Effect of Corporate Governance Mechanism on Comprehensive Income Reporting: A Proposed Model

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Abstract

International Accounting Standard Board (IASB) and Financial Accounting Standards Board (FASB) require companies to mark-to-market certain financial assets and liabilities and to recognize related gains and losses as other comprehensive income. When an active market (quoted prices) for other comprehensive income items does not exist, valuation techniques that employ observable or unobservable input are used. Valuation techniques use in determining unobservable input and perhaps observable input requires management assumptions and judgments. Users' concerns about managerial discretions in establishing fair value gains and losses on certain assets and liabilities relating to comprehensive income may pose questionable reliability that subsequently affect investors' pricing of fair value gains and losses reported as dirty surplus flows. On the assumption of valuation theory and agency theory, this paper offers a theoretical explanation on the implication of corporate governance mechanisms (ameliorate reliability issues) on investors' pricing of comprehensive income and other comprehensive income.

Keywords: Auditor's Reputation; Audit Committee Effectiveness; Comprehensive Income; Managerial Discretion.

JEL Classification: G34, M42

1. Introduction

An old and unresolved challenge facing standards setter and users of accounting information centre on the choice of more appropriate method of assessing the periodic financial position and performance (Kanagaretnam, Mathieu & Shehata, 2009). The proponents of all inclusive approach contend that all changes in the value of assets and liabilities measured at the market value should pass through the income statement. Such approach of measuring periodic performance is considered more appropriate because it explicitly shows all changes in the value of assets and liabilities at the beginning and at the end of the financial period (Firescu, 2015). Thus, presenting all cash flows changes resulting for both fair value

changes in balance sheet items and cash flows from operating performance, users of financial statement can easily distinguish between value creation and value distribution (Chambers, Linsmeier, Shakespeare, & Sougiannis, 2007; Kanagaretnam et al., 2009; Mechelli & Cimini, 2014; Firescu, 2015). This is contrary to the current operating performance approach where temporary changes (dirty surplus flows) arising from non-core operations bypass the income statement and reported directly on the balance sheet under the owners' equity section⁵. To justify the desirability of all inclusive income approach such as Comprehensive Income (CI), it was argued that reporting dirty surplus flow directly to balance sheet "may encourage management to opportunistically manage earnings. This may cause misleading inferences to be drawn by the users of accounting information" (Kanagaretnam et al., 2009). Therefore, considering the comprehensiveness of all inclusive approach of measuring financial performance, promoters call for a CI-type statement to display all relevant components of income (Hirst & Hopkins, 1998; Kanagaretnam et al., 2009; Lee & Park, 2013; Firescu, 2015).

Interestingly, the propositions by the promoter of all inclusive measurement method, partly stimulate the enforcement of Statement of Financial Accounting Standard (SFAS 130) and International Accounting Standard (IAS 1) on CI reporting (Kanagaretnam et al., 2009; Lee & Park, 2013; Mechelli & Cimini, 2014). By these promulgations, companies are mandated to mark-to-market changes in the value of non-current assets, available-for-sale financial assets, foreign currency translation from foreign operations, defined benefit plans and effective portion of cash flow hedge (Kanagaretnam et al., 2009; Lee & Park, 2013; Firescu, 2015). The visibility of these Other Comprehensive Income (OCI) items on the face of primary financial statements will probably lessen the cost of searching for important valuation matric (Hirst & Hopkins, 19981; Kanagaretnam et al., 2009; Lee & Park, 2013), reduce earnings management (Song, Thomas, & Yi, 2010; Lee & Park, 2013) and reduce the propensity of losing vital information (Hirst & Hopkins, 19981; Song et al., 2010). Thus, their presentation provides capital markets participants with multiple relevant financial performance indicators and consequently enhances the level of transparency of financial statements. As a follow-up on this argument, numerous studies had established that these dirty surplus flows represent relevant information to investors (Song et al., 2010; Kanagaretnam et al., 2009; Smith & Jones, 2011; Lee & Park, 2013).

However, evidence abounds that fair value measurement induced earnings management, especially for measurement method that requires judgements and assumptions (Dhaliwal et al. 1999; O'Hanlon & Pope, 1999; Lopes & Walker, 2012). Given that CI and OCI comprises of several items with varied fair value measurement levels, including unobservable inputs and perhaps observable inputs, intrinsic estimation error and management-induced error may exist. The impending concern for this possibility is the

⁵ This position is assumed because allowing these less persistent 'dirty surplus' to pass through the income statement increases earnings volatility and reduce its importance for valuation and contracting purpose (Kanagaretnam et al., 2009; Lee & Park, 2013). Another major criticism against current operating performance is the arbitrary manner in which substantial accounting amount eludes disclosure on the face of the primary financial statement (Cahan, Courtenay, Gronewoller, & Upton, 2000; Kanagaretnam et al., 2009; Lee & Park, 2013).

questionable reliability of fair value gains and losses on OCI items used in computation of CI and OCI. This is because unlike using quoted price to determine fair value of assets or liabilities, valuation techniques applicable for observable and unobservable inputs require management to make some judgments and assumptions (Song et al., 2010; Lee & Park, 2013). Given the propensity of measurement errors and perhaps intentional manipulation when using discretion to determine these fair value gains and losses, investors could expect deviations on the part of the managers (Song et al., 2010; Lee & Park, 2013). This may dictate some information asymmetry problems capable of creating severe moral hazard (Bartov, Mohanram, & Nissim, 2007; Song et al., 2010; Lee & Park, 2013).

Seemingly, these anomalies are often curtailed through effective corporate governance practices serving as a deterrent to unethical behaviour (Bartov et al., 2007; Song et al., 2010; Lee & Park, 2013). This is based on a general perception that corporate monitoring curtails opportunistic tendencies and hence, enhances the reliability and integrity of the financial reporting process (Song et al., 2010; Lee & Park, 2013). Thus, in valuing CI and OCI, investors may place different weights on these earnings numbers based on firms' corporate governance mechanisms as Habib and Azim (2008), Song et al. (2010), Lopes and Walker (2012), Lee and Park (2013) documented for other accounting numbers. In this study, we provide a theoretical explanation on how corporate governance mechanisms could ameliorate investors' perception of the reliability of CI and OCI. Specifically, we demonstrate how audit committee independence, audit committee financial expertise, the frequency of audit committee meetings, audit committee size, no internal control material weakness and auditor's reputation would enhance the value relevance of CI and OCI. These corporate governance variables are synonymous with six CG elements.

The remaining part of this paper is structured as follows: section two presents related literature on CI and OCI. Section three delineates review of corporate governance variables. We discussed the theoretical framework in section four and section five is the conclusion.

2. Literature Review

2.1 Related Literature on Comprehensive Income and Other Comprehensive Income

One primary objective of preparing and publishing a financial statement is to provide useful information on the financial position and performance of a business. Accounting earnings is one of several important information published in the financial statement that give an insight about the real performance of a firm to users (Subramanyam, 2014). Accounting earnings is a multifaceted variable used to describe a firm's income, such as CI and OCI. IAS 1 "Financial Statement Presentation", define CI is the net income adjusted for OCI items, whereas OCI is the sum of:

1. Changes in revaluation surplus for Property, Plant and Equipment (IAS 16);
2. Actuarial gains and losses on defined benefit plans recognised in accordance with paragraph 93 of IAS 19 Employee Benefits;
3. Changes in foreign currency from translating the financial statements of a foreign operation (IAS 21 the Effects of Changes in Foreign Exchange Rates); and
4. Gains and losses on re-measuring available-for-sale financial assets (IAS 39 Financial Instruments: Recognition and Measurement).

One major innovation by the IASB is mandating the presentation of CI and OCI in financial statements when reporting under IAS/IFRS regulation. A plausible justification for this is to enhance the transparency of financial statements and simultaneously provide capital market's participants with more financial performance indicator for firm valuation. A tremendous effort had been made in examining the relative and incremental value relevance of CI and OCI. On the wave of this interest, Cheng et al. (1993) revealed that when explaining the market value of equities, net income dominates CI. Dhaliwal et al. (1999) and O'Hanlon and Pope (1999) found no evidence to conclude that CI was more strongly priced than the traditional net income. Similar to the pioneering studies, more recent studies found evidence to support a dominance of net income over the CI (Wang, Buijink, & Eken, 2006; Brimble & Hodgson, 2008; Goncharov & Hodgson, 2011; Jones & Smith, 2011; Turen & Hussiny, 2012; Mechellia & Cimini, 2014; Firescu, 2015; Marchinia & D'Este, 2015). By contrast, some authors have also reported opposite result, suggesting dominance of CI over the traditional net income (Cahan et al., 2000; Biddle & Choi, 2006).

Another line of research investigates the incremental value relevance of OCI. Using samples of New Zealand firms, Cahan et al. (2000) revealed that OCI provides incremental information over traditional net income. However, they established that no benefit exists for reporting a separate CI type statement. O'Hanlon and Pope (1999) and Dhaliwal et al. (1999) documented that OCI scaled by the beginning price and stock returns was value destroying in the United Kingdom and the United States respectively. According to Wang et al. (2006) and Kanagaretnam et al. (2009), accumulated dirty surplus flows for a period of 10 years and yearly OCI were not value relevant. In some instance, OCI was value relevant, but displayed a negative persistence (Jones & Smith, 2011), continuously lower than that of traditional net income (Mechelli & Cimini, 2014), and was driven by the "expected location based on the firm's reporting history" (Schaberl & Victoravich, 2015, p. 6).

Overall, commenting on the above review, it is safe to postulate that consensus has not been reached on the superiority of CI over the net income (historical cost convention). Also, the incremental value relevance of OCI is driven by contextual factors. Again, how subjectivity in measuring some OCI items affects the overall value relevance of CI and OCI is less clear from the previous studies. Exceptions are O'Hanlon and Pope (1999), Lopes and Walker (2012) and Lee and Park (2013). O'Hanlon and Pope (1999) claimed that, contrary to the general perception of increased clarity and transparency of CI reporting does not translate to incremental value relevance of earnings, but seems to reduce undesirable creative accounting activity by UK firms" (p. 1). Lopes and Walker (2012) documented that fair value measurement of OCI items is associated with agency cost because it was designed to improve equity positions and not to signal additional information to investors. Lee and Park (2013) claimed that more subjective components of OCI were more value relevant when conditioned for auditor's reputation. Building on these studies, the current study proposes a model that incorporates six CG elements to demonstrate the effect of overall corporate governance mechanism on investors' pricing of CI and OCI as discussed in the next section.

3. Review of Corporate Governance Variables

Historically, corporate governance practices or codes were designed in developed countries (Reed, 2002). However, developing countries have found it essential to mimic developed

countries in order to attract capital inflows and to enhance capital market operations (Reed, 2002). One pivotal function of corporate governance that is well ingrained in the literature is its oversight function intended to protect the quality of financial statement to safeguard the interests of various stakeholders through (Habib & Azim, 2008; Bhat, 2009; Song et al., 2010; Lopes & Walker, 2012; Lee & Park, 2013). Given its benefits, firms are under pressure to adopt good corporate governance, which is often formalized in terms of corporate governance codes.

Because the present accounting environment tilted towards fair value accounting reinforces the need for effective corporate governance practices to maintain public trust on the quality of accounting information. In Figure 1, we argued that high corporate governance practices could lead to positive behavioural attitude and mitigate agency cost and subsequently lead to high quality accounting numbers. This is because both internal and external audit functions perform several audit tasks, which overall, strengthen the operational environment and ensure transparent financial reporting process. For reasons presented beyond this paragraph, we propose that elements of corporate governance mechanisms comprising of internal and external audit function could influence investors pricing of CI and OCI.

A general assumption entails that involvement of external auditor in the financial reporting process enhances the quality of financial statement (Ismail & Chandler, 2005; DeFond, 2010; Song et al., 2010; Lee & Park, 2013). While reducing agency cost of opportunistic behaviour of managers, external auditor provides a third party opinion on the reliability with which client's financial statement is drawn. Presumably, external auditors provide higher-quality audit, which reduces the amount of management subjectivity of questionable accounting decisions (Song et al., 2010; Lee & Park, 2013) and need to avert litigation risk (Lee & Park, 2013). Because CI and OCI items comprise of "mark-to-market" types of adjustments, investors may be constrained from observing directly whether the reported information reflected the real firm's financial performance. Often, they rely on the auditor's judgement of the fair-value measurement of such economic assets and liabilities (Song et al., 2010; Lee & Park, 2013). Thus, it is possible to notice a superior level relationship of CI and OCI and the market value of equities for reputable audit firms. DeFond (2010), Song et al. (2010) and Lee and Park (2013) examined the effect of auditor's reputation on investors' pricing of OCI items and fair value hierarchy information using return model. An interesting finding from their study suggests higher investors' pricing of OCI items and fair value hierarchy information when financial statement is certified by reputable auditors. Thus, the impact of the auditor's reputation on the investors' judgment of reliability of CI and OCI is justified.

Similarly, audit committee effectiveness is one of the components of corporate governance element frequently associated with the quality and integrity of financial reporting. Internationally, a best practice audit committee has been emphasised by several regulatory and legislative reforms such as the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees (BRC) 1999 and Sarbanes Oxley-Act 2002 (Yasin & Nelson, 2012; Woidtke & Yeh, 2013). As part of the corporate governance oversight function, an effective audit committee has a discipline effect on the management's discretion in the fair value determination (Song et al., 2010). Reporting entities with no audit

committee are more likely to engage in financial statement fraud and other accounting irregularities (Abbott & Parker, 2000; Abbott, Parker, & Peters, 2004).

For instance, the proportion of independent non-executive directors to the total number of directors sitting on the boards was positively associated with comprehensiveness of financial disclosure (Chen & Jaggi, 2000), negatively associated with earnings management (Klein, 2002; Jenkins, 2003) and more reliable reported earnings (Woidtke & Yeh, 2013). The independence of audit committee significantly associated with firm performance, especially for firms with high agency conflicts (Dey, 2008). By contrast, Rainsbury et al. (2009) and Suárez et al. (2013) documented that the quality of accounting numbers is not associated with the proportion of audit committee independent directors. Studies that observed enhanced quality of financial reporting claim that independent director's financial sophistication could be important factors in reducing earnings management. This could imply more human resources for effective scrutiny of subjective accounting measures and related valuation models (Xie, Davidson & DaDalt, 2003). Thus, high quality CI and OCI can be expected for firms with high number of independent directors as audit committee members.

Audit committee meeting is another corporate governance element frequently associated with quality of earnings. The frequency of audit committee meetings allows the committee members an ample time to review the internal control system and firms overall audit process to ensure financial reporting quality (Xie et al., 2003; Barua et al., 2010; Yasin & Nelson, 2012; Woidtke & Yeh, 2013). The frequency of audit committee meetings is negatively associated with discretionary current accruals (Xie et al., 2003) and more likely to update the members on the current auditing issues and be more diligent in fulfilling their duties (Yasin & Nelson, 2012).

Furthermore, the presence of a financial and auditing expert sitting in the audit committee quorum leads to high quality financial statements. The financial expertise of audit committee members seems to be a fundamental factor in monitoring and forestalling earnings management and financial restatement (Xie et al., 2003; Agrawal & Chadha, 2005). Evidence of positive stock market reactions as a response to good news management forecasts for firms with financial and audit expertise on their audit committee has been documented (Davidson et al., 2004; DeFond et al., 2005; Karamanou & Vafeas, 2005; Woidtke & Yeh, 2013). Audit committee members with financial expertise make useful input that aids the committee at reducing internal control problems and inefficiency in financial reporting (Xie et al., 2003; Naiker & Sharma, 2009; Rainsbury et al., 2009; Yasin & Nelson, 2012). Thus, the above evidence suggests that audit committee financial expertise can improve financial reporting quality by reducing incidences of earnings management, accounting irregularities and fraudulent financial reporting. Thus, market participants may perceive CI and OCI by these firms to be more value relevant and reliable.

Also, previous studies provide links between internal control system and the quality of accounting information. For instance, the determinants of disclosure of material weaknesses in internal control (Doyle, Ge, & McVay, 2007a), effect of material weaknesses and earnings quality (Doyle, Ge, & McVay, 2007b; Ashbaugh-Skaife, Collins, Kinney, & LaFond, 2008), corporate disclosure behavior (Gordon, Loeb, Lucyshyn, & Sohail, 2006),

and reactions of market participants to the disclosure of internal control weakness (Hammersley, Myers, & Shakespeare, 2008; Kim & Park, 2009; Brown et al., 2014). Firms without material internal control weakness problems are less likely to suffer aggressive financial reporting, estimation errors and biased management forecasts. One possible reason for this is that effective internal control system allows the internal audit staff to monitor preparation of the annual report effectively (Song et al., 2010). Thus, if an assumption is made based on previous findings that an internal control system reduces the reliability concern of fair value estimate, then it can be argued that disclosure of no material internal control weakness may enhance investors' pricing of CI and OCI.

Based on the above review, the influence of corporate governance elements on the quality of financial statement is unequivocally presented. Therefore, to the extent that corporate governance mechanism measured based on the six CG elements will scrutinize the financial reporting process, opportunistic assumption and judgement in the financial reporting process will reduce. To the extent that the perceived reduction in agency cost would ameliorate the reliability concern of professional and non-professional investors, one might expect that the strength of corporate governance could influence investors pricing of CI and OCI as presented in Figure 1.

3. Theoretical Framework

One important theory that we used to demonstrate the relationship between CI and OCI and market value of equities is the valuation theory (Beaver, 2002). To provide alternative valuation metric to capital markets participants beyond the traditional net income, both FASB and IASB require gains and losses from non-core business activities to be included in financial statement as OCI items when determining CI for a given period. This approach suggests adjusting net income for OCI items as defined by the IAS 1. Even though OCI items are market based measures, their presentation in the primary financial statement to display all changes in the economic value of assets and liabilities at the beginning and at the end of the financial period is perceived as the most appropriate approach to income measurement for firm valuation (Chambers et al., 2007; Firescu, 2015).

On the basis of the valuation theory, several studies had documented relative and incremental value relevance of CI and OCI. Using valuation as a paradigm, prior studies estimate the coefficients of net income and CI with share price or stock returns in separate models to test their importance for valuation input (Dhaliwal et al., 1999; O'Hanlon & Pope, 1999; Cahan et al., 2000; Goncharov & Hodgson, 2011; Jones & Smith, 2011; Turen & Hussiny, 2012; Mechellia & Cimini, 2014; Firescu, 2015; Marchinia & D'Este, 2015). A variable and model with higher coefficient and adjusted R^2 is considered to be the most value-relevant. Another stream of literature also investigates the incremental value relevance of OCI (O'Hanlon & Pope, 1999; Biddle & Choi, 2006; Wang et al., 2006; Jones & Smith, 2011; Mechellia & Cimini, 2014; Schaberl & Victoravich, 2015). These studies are based on the assumption that OCI is value relevant when compared to the net income if its regression coefficient is significantly different from zero. Overall, these studies affirmed that both CI and OCI represent a significant predictor of the market value of equities. Therefore, our choice of the valuation theory to demonstrate direct test of the relationship between CI and OCI and the market value of equities is justified.

As discussed in the previous section, there exist instances where investors could exhibit defalcation when valuing CI and OCI due to the use of valuation technique (for observable and unobservable input) to determine economic value of assets and liabilities whose input are not obtainable from the active market. If the perception of investors about the financial statements quality favours assumptions of a usual “big bath” instead of genuine changes, it is possible not to identify relative and incremental value relevance of CI and OCI respectively. But, because firms will want to be recognised for best practices, we employed agency theory to demonstrate how corporate governance mechanisms influence investors valuation of CI and OCI due to reduction in perceived information asymmetry.

In an incomplete and imperfect market condition, agency cost appears as a common threat that fraught the principal-agent relationship (Jensen 1976, Lee & Park, 2013). Because agents have a high level of control of firm’s operations and task with the responsibility of preparing financial statement, they may explore the advantage of being more informed than investors and misrepresent information for personal benefits (Dey, 2008). Under such condition, agency cost is likely to be severe where there is an absence of the market value of certain assets and liabilities, but rather measured using internally generated estimates (mark-to-model). When fair value estimates are mark to model, it would be difficult for investors to verify the true and fair view of such transactions (Song et al., 2010; Lee & Park, 2013). Given the fact that interest of the principal may not always be the motive of the agent, it is not exaggeration to say actual results could differ materially from the reported information (Dey, 2008; Song et al., 2010; Lee & Park, 2013). Managers may elect valuation technique that is technically within accounting standard, but compromise representational faithfulness. For instance, the desire to achieve certain performance target may motivate managers to smooth earnings instead of reporting volatile earnings or understate/overstate values of assets and liabilities. This scenario presents cases of information asymmetry and deterioration in capital market efficiency (Dey, 2008; Francis & Michas, 2013; Woidtke & Yeh, 2013).

However, a measurement approach that uses valuation techniques should probably suffer less information asymmetry, given firms strong corporate governance mechanisms. This is because anecdotal and empirical evidence underscores the importance of corporate governance mechanism on reliability of accounting information (Bartov et al., 2007; Dey, 2008; Habib & Azim, 2008; Song et al., 2010). Specifically, an interplay of audit committee effectiveness, sound internal control system and external auditor’s reputation could substantially shape the quality and integrity of reported accounting numbers (Ismail & Chandler, 2005; Dey, 2008; Song et al., 2010; Francis & Michas, 2013; Woidtke & Yeh, 2013). While performing a monitoring role, the knowledge, expertise and different skills possessed and exchanged between these corporate governance elements could mitigate agency costs induced by information asymmetries. Therefore, we propose that the corporate governance mechanism is likely to enhance the perception of investors about the reliability of CI and OCI.

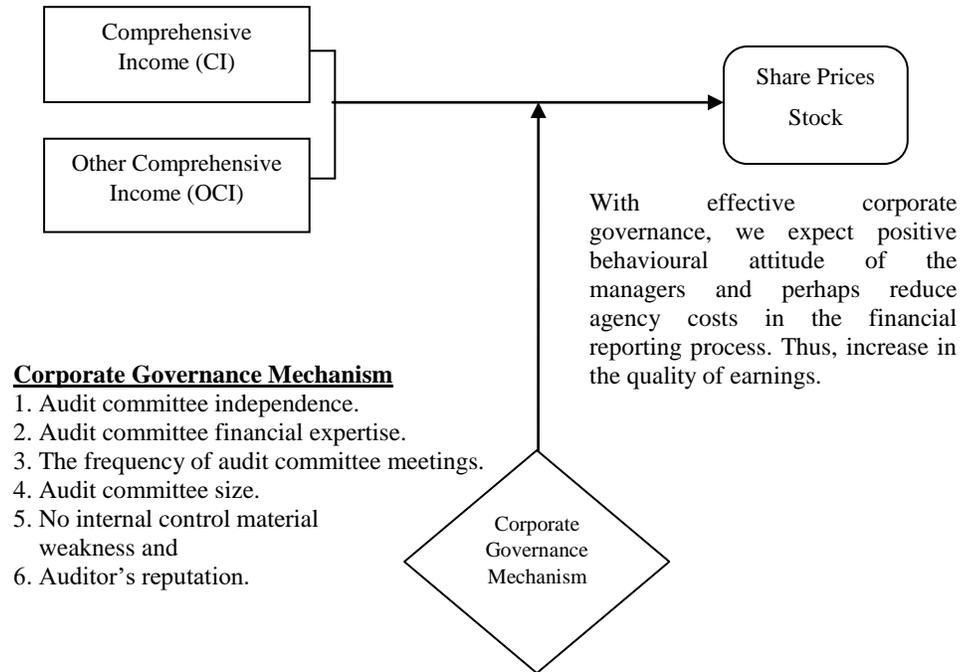


Figure 1: Conceptual Framework on the Influence of Corporate Governance Mechanism on the Relationship Between Comprehensive Income and Other Comprehensive Income and Share Prices/Returns.

Note: We propose that a combined score and individual elements would address the reliability concern regarding management's judgement and assumptions relating to CI and OCI.

4. Conclusion

This study is motivated by the managerial subjectivity in the fair value determination of certain assets and liability as they relate to comprehensive income and other comprehensive income measure of financial performance. Evidence from previous studies suggest that regardless of measurement approach used in ascertaining holding gains and losses on certain financial assets and liabilities, comprehensive income and other comprehensive income represent important financial performance indicators. Unequivocally, previous studies had also established the influence of a sound internal control system, audit committee effectiveness and external auditor's involvement on the quality and reliability of financial information. We proposed the influence of these variables on the value relevance of CI and OCI. Consequently, providing scholarly evidence on the combined and individual influence of corporate governance variables on comprehensive income and other comprehensive income could extend the value relevance and corporate governance literature.

This shift in methodology had several critical implications for improving firms' valuation. First, if the proposed framework is validated, the findings would provide useful insight to investors and managers on the importance of combining financial and non-financial information in the valuation process. Second, we believe that this approach will help to minimize the bias risk of value relevance inference, especially in environment where doubt has been raised over accounting and auditing practice and could be a long lasting panacea to rebuilding investors' confidence on accounting numbers. Our inability to comprehensively discuss a wider spectrum of corporate governance variables is the major caveat of this paper.

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Empirical Analysis of Fiscal Policy on Unemployment in Nigeria: 1981-2016

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Abstract

This study examines the impact of fiscal policy on unemployment in Nigeria employing annual time series data from the CBN statistical bulletin (2016) for the period between 1981 and 2016 and an autoregressive distributed lag model. Unemployment rate was made the dependent variable while the fiscal policy tools of real capital expenditure, real recurrent expenditure and real tax revenue were explanatory variables. The findings of the study reveal that unemployment significantly responds negatively to changes in real capital expenditure but positively to real recurrent expenditure and real tax revenue. In the short-run, real government capital expenditure show an insignificant negative impact on unemployment while real recurrent expenditure exhibits negatively and significant impact on unemployment. In the long run, real capital expenditure has a negative and significant impact on unemployment while real recurrent expenditure and real tax revenue exhibit positive and significant impact on unemployment rate.

Keywords: ARDL, Fiscal Policy, Government Expenditure, Unemployment

JEL Classification: H50, J64, J68

1. Introduction

Unemployment is an endemic social and virulent disease that forms one of the main objectives of macroeconomic thought. Most economies often want to achieve a full employment status because of the contagious challenges unemployment causes in the society. Research has shown that countries with high unemployment rate suffer from societal violence such as civil war, riots and many other vices. Governments' ability to generate revenue from this unemployed labour force would no doubt be hampered.

According to Tobin (1972) total vacancies and unemployment is determined by aggregate demand, and is subject to control by monetary and fiscal policies. Being particular about fiscal policy here, when government implements an expansionary fiscal policy through increase in capital and recurrent expenditure, in form of embarking in new projects like construction and rise in workers' salary, apart from rise in demand for workers through

construction, workers demand for more goods and services within the real sector. Their demand results to high aggregate demand in the economy which will trigger and induce investors to invest in such sector as there is ready market for goods produced. When investment goes high, demand for workers will invariably become high as workers will be needed for production. Hence, unemployment rate will go low.

It is worth mentioning that the term unemployment, like any other term in Economics, has conventionally been defined, described and debated in different ways from one society to another. In the words of Nigerian Labour Force Survey, “unemployment rate is the proportion of labour force that was available for work but did not work in the week preceding the survey period for at least thirty-nine hours” (NBS 2011). In Nigeria, people are considered unemployed when they are between the ages of fifteen and sixty-four, on ground for work and zealously looking for a job at the prevailing wage rate but could not secure any. There are some people who are not counted as being unemployed according to NBS (2015) because they decided to remain at home such as full-time housewives, those who are self employed, those who are full-time students or are in poor health and unable to work.

Despite the fact that tax cut and expansion in government spending could promote economic growth and development and reduce unemployment *ceteris paribus*, the duo policies would amplify government's debt. The theory, in practice, of this tax cut implies that the government gets less revenue, and if spending exceeds revenue, the government incurs deficit, which could increase its debt load if the budget must balance.

Just as fiscal structure of any economy fundamentally describes the institutional framework within which the government undertakes its financial operations in the form of tax revenue, government expenditure and borrowing, fiscal policy is concerned with a view to achieving certain economic policy objectives such as economic development and growth, price stability, reduction in unemployment, external equilibrium as well as income redistribution. In more recent years, however, the general disenchantment over the limited success in the achievement of the policy objectives has brought into sharp focus the question of effectiveness of fiscal policy in relation to other policies especially monetary policy and the consideration as to whether or not the continued heavy reliance on fiscal policy as an economic stabilization tool is desirable (*Samuelson 1971*).

Taking into consideration the fiscal policy structure adopted by the Federal Government over the years under consideration, it is essential to ask how this has induced employment in the country. The questions that fundamentally come to mind are: did the easing or tightening fiscal policy stance manage to assuage unemployment? What are the implications of such a fiscal policy stance as it affects unemployment? Are these implications significant in real sense? Can we say fiscal policy has short run or long run significant impact on unemployment? As a result, this study seeks to investigate the real impact of fiscal policy on unemployment in Nigeria. To be specific, the study examines the real response and impact of government expenditure and tax revenue on unemployment rate. This study contributes to knowledge in that most studies in economic literature have examined nominal response and nominal impact of fiscal policy on unemployment rate. None so far, to the best of our

knowledge has studied the real impact of fiscal policy on unemployment in Nigeria. This is the gap, in literature, the study wants to cover.

This study is organised as follows: Part Two presents the stylized facts on fiscal policy and unemployment rates in Nigeria within the period 1981 to 2016. Part Three provides a brief review of literature. Part Four discusses the methodology. Part Five analyses the model and discusses the results of the study, Part Six presents the conclusion and policy recommendations.

2. Literature Review

2.1 Stylized facts on Fiscal Policy and Unemployment in Nigeria (1981-2016)

The trend of fiscal policy and unemployment in Nigeria can be summarized in figure 1. Unemployment in the late 1970s and early 1980s was not an issue as it hovered around the full employment rate of approximately 5% which extended to late 1990s except for the economic turbulence that entangled the nation in 1991 which led to unemployment hike for the first time within the period to about 14.5%. Though it recorded some marginal decline between 1981 and 1986, the rates were relatively low. The unemployment rate oscillated between 5.3 and 6.4 percent during 1980 - 85 periods. This development was as a result of the calm in the economy during the period.

2.1.1 Budget Deficit (Bd) and Unemployment Rate (U) in Nigeria.

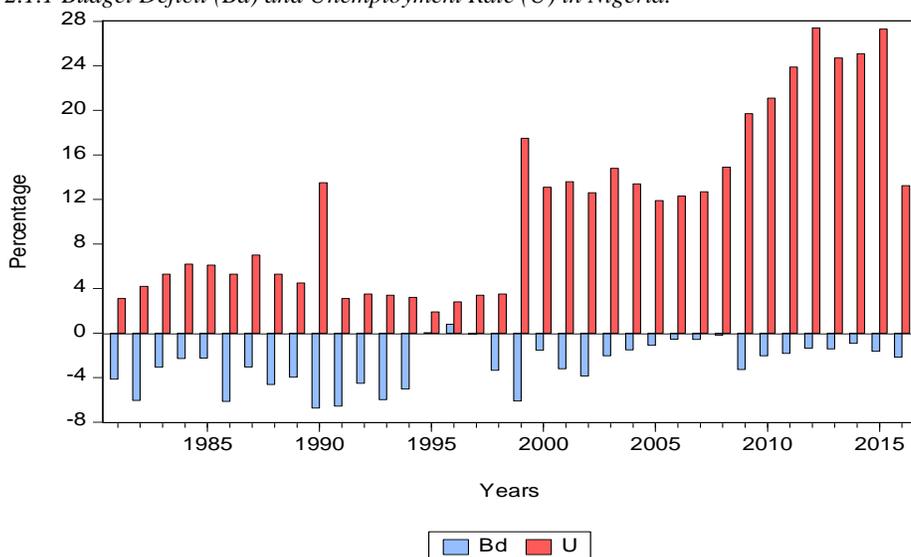


Figure 1: Source: Author’s own computations with data from the CBN Bulletin (2017)

The Structural Adjustment Programme (SAP), adopted in 1986, had severe implications on the short run unemployment crisis. Conflicting to the expectations of SAP, which was directed towards inducing greater employment opportunities in the private sector (especially among the small and medium enterprises), the unemployment rate managed to reduce from

6.2 per cent in 1985 to 5.3 percent in 1986 as a result of huge budget deficit. Due to the pressure of SAP (tightening fiscal policy), budget deficit dropped drastically in 1987, which accounted for the organizational down-sizing, re-engineering and rationalization policies on public enterprises. This was further compounded by the continuation of staff retrenchment and placement of embargo on employment in the public sector. Besides, the new policy course brought about some structural changes within the Nigerian labour market. Sectors such as the oil, banking and the external sectors became the "blue chips" as against the public and industrial sectors which used to be the "prime" of the labour market prior to the adoption of SAP in 1986. This development, as a result, created some structural and frictional unemployment problems in the country. When these problems are considered along with lack of job placement for fresh graduates, the situation becomes more precarious. As pointed out by Umo (1996), "an annual average of about 2.8 million fresh graduates enter the Nigerian labour market, with only about 10 percent of them getting employment". This, no doubt, portrays unemployment as a very serious problem in the country.

It is evident from figure 1 that unemployment fell very significantly after 1987. It fell consistently from 7.0 percent in 1987 to 3.1 percent in 1991. Although it rose marginally to 3.4 percent in 1992, the unemployment rate, however, consistently declined appreciably to 1.8 percent in 1995 before rising to 3.4 and 4.5 percent in 1996 and 1997 respectively. However, the estimated unemployment gap for Nigeria indicated that the unemployment rate (U) varied between 7.27 and 8.0 between 1990 and 1998, but in 1990, despite the high budget deficit (Bd), the country recorded a tremendous rise in the unemployment rate to the tune of 12.3 per cent, the highest so far in two decades (1979-1999) meaning that the deficit was not effective in reducing unemployment. That was why the then Federal Office of Statistics published that between 1983 and 1998, unemployment rates averaged at 4.0% which signaled full-employment. It is worthy of note that between 1994 and 1997, the nation witnessed a balanced budget except in 1996 that recorded a fiscal surplus, the first and only, within the period under review. The observed downward trend, due to fiscal policy easing between 1990 and 1994, may be partly attributed to the intensity of the implementation of the Agricultural Development Programmes (ADPs) and the Accelerated Development Area Programmes (ADAPs). The ADAPs was afterward transformed into the Directorate of Food, Roads and Rural Infrastructure (DFRRI). The activities of the National Directorate of Employment which was launched in 1986, the Peoples Bank, Better Life for Rural Women Programme, among others, might have also accounted for the decline in unemployment rate within this period. The intensification and expansion of the informal sector activities could also be an important factor during this period. The informal private sector expanded in scope of activities and in pattern of employment, with more graduates participating in the sector.

More so, between 1999 and 2013, unemployment rate published by NBS (2015) mirrored the concern of the federal government that unemployment was a major issue which showed noticeable increasing trend among youth unemployment. For instance, in 2011, the country recorded unemployment rate of 23.9% and rose to 24.7 in 2013 and increased further to 25.1 and 27.3% in 2014 and 2015. These high rates show clearly that unemployment is an issue in the economy, though the extent of fiscal deficit from 2003 through 2015 was not as high

as those of the 1980s and 1990s. Summarily, Nigeria experienced high fiscal deficit and very low unemployment rate in the 1980s and 1990s. The reverse was the case during the period 2000 to 2016 as evident in figure 1.

From figure 2, it is crystal clear that despite the international development standard that government capital expenditure (GCE) to recurrent expenditure (GRE) should be 70:30, it was more or less the other way round. GRE has all through surpassed GCE with a very wide gap in many years except between 1996 and 1999 in the history of the country. Between 1981 and 1989, GCE and GRE were approximately at pa.

2.1.2 Capital Expenditure(Gce) and Recurrent Expenditure (Gre)

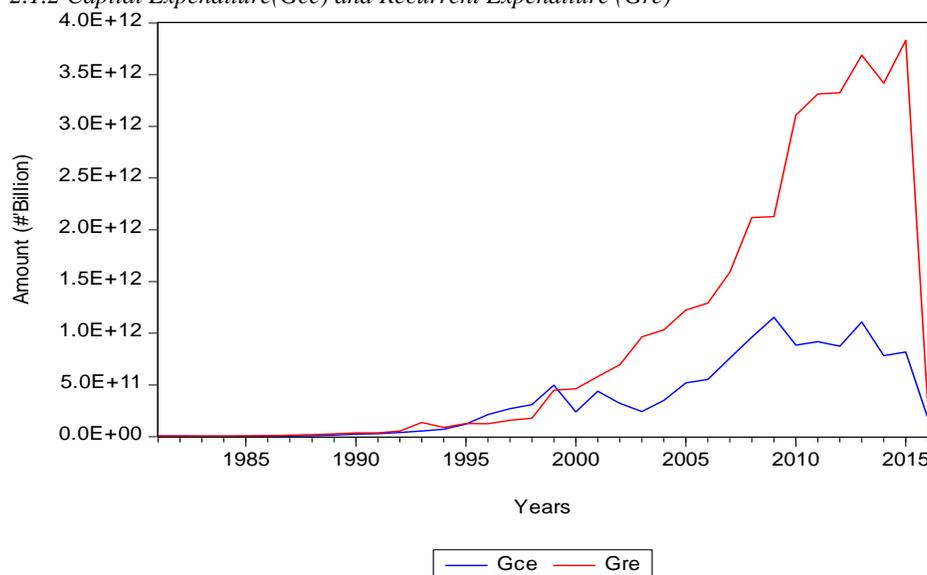


Figure 2 Source: Author’s own computations with data from the CBN Bulletin (2017)

2.2 Empirical review

Fiscal policy is the use of government expenditures, taxes and deficits (or surpluses) as a policy to change the tide of the economy. According to The Free Dictionary, fiscal policy describes taxation and spending that the government pursues in an effort to influence the overall state of the economy. While government deficits can be financed through increases in the money supply (and surpluses be accompanied by decreases in it), macroeconomics defines fiscal policy as one in which money supply is held constant, so that the deficits must be financed by government borrowing through increases in its bond sales to the public. In the same way, fiscal surpluses could be invested into purchase of bonds from the central bank and their retirement, without changing the money supply in circulation in the economy. To repeat, fiscal policy could be bond-financed. Realistically, fiscal and monetary policies are entwined and they are supportive policy for effective result. Economies employ them based on their economic systems (Handa 2009).

Classical economists dispute that fiscal policies cannot, in the long term, affect the level of real output (GDP). Contrary to this, the Keynesian economists posit that fiscal policy can affect the level of national output and employment level (Anderton 2010). The significance of fiscal policy as a policy instrument for economic development was prominently initiated by Keynes (1936) in his *General Theory* in which he showed that the total national income was an indicator of economic activity and brought out the connection of economic activity to total government expenditure (Cacci *et al* 2003). Even if the ultimate aim of fiscal policy is the long run stabilization of the economy, it could be achieved by moderating short run economic fluctuations. In this context, Culberston (1968) asserted that 'by fiscal policy, we refer to government actions affecting its receipts and expenditures which we ordinarily take as measured by the government's net receipts, its surplus or deficit'. Hence fiscal policy could be used to influence employment when geared towards that direction like the N-Power programme of the present Nigerian government which started in 2016, specifically on employment, as this study would verify.

According to the Keynesian theory, spending on government programmes is a way (transmission mechanism) the federal government can attempt to influence employment. When the government funds new public work programmes, such as building infrastructure like roads or train system, it can create jobs that serve to reduce unemployment and increase disposable income and spending. If such programmes promote overall economic growth, public-sector workers may be able to find jobs in the private sector after the projects are complete. In the opposite, taxation is one of the primary fiscal policy tools the government has at its disposal to reduce unemployment. Theoretically, high taxes mean consumers would have less disposable income, whose resultant effect is reduction in consumption. When consumers' purchase drops, businesses realise less revenue and are most likely to reduce workers in order to cut costs. Cutting taxes is a common method government uses to spark economic growth and reduce unemployment. Tax reduction puts more money into the hands of consumers, which can lead to increased revenue for business expansion and employment. Also, it would allow consumers to have more disposable income which results to high consumption and increase in aggregate demand.

Previous researchers conducted several studies regarding the impact of fiscal policy on unemployment globally among whom were: Antonio and Ilian (1998); Michele, C. (2005); Anthanasios (2013);, but very few did for the Nigerian economy, among whom are Nick, Igwe and Wilfred (2015); Egbulonu and Amadi (2016); Abubakar (2016); and Obayori (2016).

Genius, Ireen and Andrew (2013) examined the impact of fiscal policy on unemployment in South Africa using annual time series data for the period 1980 to 2010. A vector error correction model was employed to determine the effects of fiscal policy aggregates on unemployment in South Africa. Results from the study revealed that government consumption expenditure and tax had a positive impact on unemployment while government investment expenditure negatively affected unemployment in South Africa.

Egbulonu and Amadi (2016) carried out a study on effect of fiscal policy on unemployment rate in Nigeria for the period 1970 to 2013. They used government expenditure, government debt stock (proxy of Government borrowing), government tax revenue and unemployment

rate (dependent variable) employing co-integration and Error Correction Model (ECM). The study revealed that a long run relationship between unemployment rate and fiscal policy tools existed. Their finding showed a negative relationship between fiscal policy tools (government expenditure and government debt stock) and unemployment rate in Nigeria while government tax revenue exhibited a positive relationship with unemployment rate. However, the finding did not reveal any impact of capital and recurrent expenditure on unemployment rate.

Abubakar (2016) came up with a research finding on dynamic effect of fiscal policy shocks on output and unemployment in Nigeria by employing the Structural Vector Autoregression (SVAR) method to analyse annual series on unemployment rate, output, fiscal policy shock (public expenditure and tax revenue) variables for the period 1981-2015. It revealed that the effect of tax revenue shock on unemployment was found to be negative but short-lived. Public expenditure had an insignificant positive impact on unemployment in Nigeria according to the study.

Ozoh, Uma and Odionye (2016) examined the influence of fiscal policy on unemployment and inflation reduction in Nigeria. They employed the Autoregressive Distributed Lag (ARDL) and an Unrestricted Error Correction Model. The findings revealed the following among others: federal government capital expenditure (a tool of fiscal policy) in the first and second year did not reduce unemployment rate but it did significantly in the third year. Petroleum profit tax and company income tax did not significantly reduce inflation but only custom and excise duty did.

Of all the studies embarked upon on the effect, impact or influence of fiscal policy on unemployment in Nigeria, to the best of our knowledge, none of the researchers has studied the real fiscal policy effect on unemployment. Also, very scanty of them have researched on the disaggregated impact of government expenditure (capital and recurrent) on unemployment. Thus, this study is different from other researches in that it investigates the impact of disaggregated government expenditure and tax revenue on unemployment rate in real term in Nigeria.

3. Methodology

Due to few papers on this topic in economic literature, very few methods have been used so far. Some used OLS which would not give an acceptable model; Cointegration method which perhaps only analyses the long run relationship; VAR and VECM which have issues with theory and equality of lag periods which in real world situation may not be obtainable. Others used SVAR which is mostly used for relationship; ARDL and its Error Correction. To analyse the impact of fiscal policy on unemployment in Nigeria, this study employed the Autoregressive Distributed Lag (ARDL) and Error Correction models because the techniques of analysis are backed with economic theory and take care of lag differences as obtainable in real life situation.

After testing for unit root using the Phillip Peron (PP) and the Augmented-Dickey Fuller (ADF) tests, the Lag Selection Order Criteria is used to select the best model then the ARDL equation is estimated. We shall examine the possibility of existence of a long run relationship in our model using the ARDL bound test. If it exists, we shall employ the

cointegrating equation and long run test thereby giving us an error correction model (ECM) used to estimate the short and long run equation and the existence of error correction. Residual tests are further performed to test for normality using Jarque-Bera test, heteroskedasticity employing White test and serial correlation using Lagrange Multiplier test.

3.1 Model Specification

The study adapts the model of Genius, Ireen and Andrew (2013) majorly because of the similarity but difference in country, data period and some other peculiarities. The model is modified to test for the effects of fiscal policies on unemployment in Nigeria. Unemployment is modeled as a function of only fiscal policy variables, government expenditure disaggregated into capital and recurrent spending, and tax revenue. This is expressed as follows:

$$u = f(\text{rgre}, \text{rgce}, \text{rtr}) \dots\dots\dots 1$$

All the variables in the dataset are first transformed into the natural logarithm for obvious statistical reasons of standardization, equality of the variables and removal of trend as rightly said by Mobolaji and Oluwatoyi (2012). The model specification in equation 1 thus assumes the form:

$$\ln u = \beta + \beta \text{rgce} + \beta \text{rgre} + \beta \text{rtr} + \mu \dots\dots\dots 2$$

where:

lu = Logarithm of unemployment rate

rgce = Logarithm of real government capital expenditure (aggregate government capital expenditure deflated by inflation) at current prices

rgre =Logarithm of real government recurrent expenditure (aggregate government consumption expenditure deflated by inflation) at current prices

lrtr =Logarithm of real tax revenue (total non oil tax revenue deflated by inflation).

μ = an error term.

We expect that when government expenditure (capital and recurrent) increases through springing up of programmes that are employment driven, more labour is demanded and thus reduces unemployment. Hence, capital and recurrent expenditure have negative impact on unemployment. Increased tax reduces disposable income of the people which will lead to reduction in aggregate demand. When aggregate demand goes down, demand and sales will as well reduce making businesses unable to sell their goods. The resultant effect is that businesses will lay off workers. Therefore, tax increase will increase unemployment i.e. positive relationship.

3.2 Data Issue

Annual time series data covering the period 1981 to 2016 are sourced from the CBN Statistical Bulletin 2017 series. The data are transformed to natural logarithm and then tested for stationarity. The ADF and PP unit root tests are used and test results are presented.

4. Results

4.1 Empirical Results

For the most part, both the ADF and PP results suggested that the null hypothesis of the presence of unit root in the variables in levels could not be rejected at 5% significance level indicating that the variables are non-stationary in levels. But, when the variables were first differenced the null hypothesis of the unit root in each of the series was rejected at 1% significance level. Therefore, we conclude that all the variables are integrated of order 1. This is as presented in Table 4.1.

Table 4.1: Unit Root Test Result

	ADF		PP	
	At Level	At 1 st Diff	At Level	At 1 st Diff
Lu	-1.9979	-7.9392***	-1.9394	-9.0260***
Lrgce	-1.6266	-4.7890***	-1.5405	-4.5051***
Lrgre	-1.7082	-5.0429***	-1.6725	-4.7347***
Lrtr	-1.1163	-5.6383***	-0.9736	-8.3139***

Note: *** denotes significance at 1% level; Source: Author's own computations from E-Views 9

From the unit root tests result using ADF and PP test in Table 4.1, all the variables were non stationary at level even at 10% level of significance. However, all the variables were stationary at 1% significant level. Hence, the study employs the first difference of the variables in question.

Table 4.2: Lag Order Selection Criteria

AIC	SIC	HQ	Adj. R-sq	Model Specification
0.674230	1.090548	0.809939	0.635180	ARDL(1, 1, 3, 0)
0.717980	1.134299	0.853690	0.618864	ARDL(1, 3, 1, 0)
0.730499	1.193076	0.881288	0.620946	ARDL(2, 1, 3, 0)
0.735388	1.197965	0.886177	0.619088	ARDL(1, 1, 3, 1)
0.736971	1.199547	0.887759	0.618485	ARDL(1, 1, 4, 0)

Note: AIC: Akaike information criterion; SC: Schwarz information criterion; HQ: Hannan-Quinn information criterion; Source: Author's own computations from E-Views 9

Since there is need to ascertain the best lag for each variable in the model, we employed the lag selection criteria of AIC, SIC and HQ. The result given in Table 4.2 shows that ARDL (1,1,3,0) model was selected. Hence the study keeps using this model.

Based on the ARDL (1, 1, 3, 0) model selection, the real fiscal policy tools (GCE, GRE and TR) were regressed against unemployment rate (U) to give use the result in Table 4.3. From the result, previous U has a significant negative impact on the present U. Real GCE and its lag value have negative significant impact on U but GCE is not significant even at 10%. Therefore, 1% increase in RGCE lagged 1 period, on the average, will lead to 0.48% reduction in unemployment. This is in line with our expectation. Unexpectedly, RGRE result showed positive response all through the periods (0- 3 lag periods) and they are all significant at 5% level.

Table 4.3: ARDL Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.187446	0.084661	-2.214089	0.0370
DLU(-1)	-0.487721***	0.170727	-2.856723	0.0089
DLRGCE	-0.233495	0.208151	-1.121756	0.2735
DLRGCE(-1)	-0.341465***	0.161598	-2.113051	0.0457
DLRGRE	0.340017***	0.156140	2.177644	0.0399
DLRGRE(-1)	0.475403***	0.198472	2.395311	0.0251
DLRGRE(-2)	0.207148***	0.094989	2.180761	0.0397
DLRGRE(-3)	0.224061***	0.104123	2.151888	0.0421
DLRTR	0.377622***	0.164142	2.300580	0.0308
R-squared	0.686317			
Adjusted R-sq.	0.577209			
DW	1.946615			
F-statistic	6.290295			
Prob(F-stat.)	0.000239			

Note: *** significant at 1% level; Source: Author's own computations from E-Views 9

RTR has an expected positive and significant impact on U, so a 1% increase in RTR, on the average, will lead to 0.38% increase in U. The R-sq and adjusted R-sq showed that the overall goodness of fit is around 69 and 58%. That is, 69% of the variations in unemployment rate in Nigeria is explained by fiscal policy tools of RGCE, RGRE and RTR. The F- statistics showed an acceptable figure as its *p*-value showed significance of fit. DW result of approximately 2.0 (1.946) shows the absence of serial correlation at a glance.

In order to examine whether fiscal policy has the ability to impact on unemployment in the long run, we tested the ARDL model for existence of any long run relationship using ARDL Bound Test. The result is given in Table 4.

Table 4.4: ARDL Bound Test Result

Test Statistic	Value	K
F-statistic	15.91934	3
<i>Critical Value Bounds</i>		
Significance	I0 Bound	I1 Bound
10%	2.72	3.77
5%	3.23	4.35
2.5%	3.69	4.89
1%	4.29	5.61

Source: Author's own computations from E-Views 9

Since the F-statistics (15.92) is more than the critical value bound at 1% (4.29 – 5.61), we reject the null hypothesis of no long run relationship between fiscal policy and unemployment and hence accept the alternative hypothesis that it exists. This result takes us to employing the error correction mechanism to examine the short, long and speed of adjustment coefficients of the model.

Table 4.5 presents the cointegrating equation consisting of short run impact and the error correction mechanism (ECM) of the ARDL model using the selected specification (1, 1, 3, 0). The coefficient of the ECM (-1.49) shows a negative sign and high speed of adjustment which is correctly signed meaning that about 149% of the disequilibrium is corrected in a quarter. It is also significant at 1% as the t-statistics (-8.714011) and probability showed.

Table 4.5: ARDL Cointegrating Equation (ECM and Short Run Coefficients)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DLRGCE)	-0.233495	0.208151	-1.121756	0.2735
D(DLRGRE)	0.340017***	0.156140	2.177644	0.0399
D(DLRGRE(-1))	-0.207148***	0.094989	-2.180761	0.0397
D(DLRGRE(-2))	-0.224061***	0.104123	-2.151888	0.0421
D(DLRTR)	0.377622***	0.164142	2.300580	0.0308
ECM(-1)	-1.487721***	0.170727	-8.714011	0.0000

Cointeq = DLU - (-0.3865DLRGCE + 0.8379DLRGRE + 0.2538DLRTR - 0.1260) *** significant at 1% level

Source: Author's own computations from E-Views 9

The short run coefficients are shown above the ECM coefficient on Table 4.5. Except for DLRGRE, all variables are correctly signed in line with our expectation and also except for DLRGCE, all variables are significant at 1% level of significance. In the short run, 1% increase in RGCE, on the average, leads to 0.23% reduction in U. However, it is found to be insignificant even at 10% level. The RGCE has negative significant impact on U at 1 and 2 lag periods, meaning that 1% increase in RGRE, on the average, leads to 0.21 and 0.22% decrease in U in the two subsequent years. Also, in the short run RTR has a positive significant impact on U.

Table 4.6: Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.125996	0.056995	-2.210627	0.0373
DLRGCE	-0.386470	0.181166	-2.133238	0.0438
DLRGRE	0.837946	0.192794	4.346323	0.0002
DLRTR	0.253826	0.109316	2.321957	0.0294

Source: Author's own computations from E-Views 9

From the result in Table 4.6, RGCE, RGRE and RTR have a long run impact on the U, and except for RGCE, all have positive impact on U. This means that, in the long run, 1% increase in RGCE, on the average, will lead to 0.39 significant decrease in U. Also a 1% increase in RGRE and RTR will lead to 0.84 and 0.25% significant increase in U in the long run period. The variables are all significant as their t-statistics show values above 2 and p-values below 0.05.

Table 7: Residual Diagnostic Test

Test	Null Hypothesis	t-Statistic	Prob.
Jarque-Bera (JB)	There is a normal distribution	0.8761	0.6452
Lagrange Multiplier (LM)	No serial correlation	0.609895	0.7372
White (CH-sq)	No conditional heteroskedasticity	8.139883	0.4199

To authenticate the parameter estimation of the results achieved by the model used in this study, residual checks were performed. The model was tested for fitness using three main tests: The Jarque-Bera test for normality; Langrage Multiplier (LM) test for serial correlation; and the White test for heteroskedesticity. Results presented in Table 7 suggested that there is a normal distribution in the unemployment model; there is no serial correlation; and there is no conditional heteroskedesticity.

4.2 Discussion of Result

The study started by sourcing for data between 1981 and 2016 for both unemployment rate and real fiscal policy tools of tax revenue, capital and recurrent expenditure. The data, being of different statuses were transformed using natural logarithm for equalization and removal of trend as posited by Adefeso and Mobolaji (2010), Genius, Ireen and Andrew (2013), Nick, Igwe and Wilfred (2015) and many others, which is contrary to Obayori (2016) that used rate and actual figure together. Unit root test was carried out employing ADF and PP. The results stated that all the four variables were stationary at first difference. This is also contrary to Obayori (2016). ARDL and ECM techniques were employed to analyse the dataset. Results show that unemployment responded negatively to changes in real government capital expenditure but positively to real government recurrent expenditure and real tax revenue. All are in line with our a-priori expectation except recurrent expenditure as obtained in the study of Ozoh, Uma and Odionye (2016). The reason could be due to incessant increase of government expenditure on increment in salaries and debt services without increasing employment. In the short run, real government capital expenditure showed an insignificant negative impact on unemployment which concurred with the study of Ozoh, Uma and Odionye (2016) though their study showed significance. In the long run, real capital expenditure has a negative and significant impact on unemployment while real recurrent expenditure and real tax revenue exhibited positive and significant impact on unemployment rate. This is in line with Fatah and Mihov (2001).

5. Conclusion and Policy Recommendations

This study examined the impact of real fiscal policy on unemployment in Nigeria employing annual time series data for the period between 1981 and 2016. The Autoregressive Distributed Lag and error correction model were used to find out the effects of real fiscal policy aggregates on unemployment in Nigeria. The fiscal policy tools considered in this study were real government capital expenditure, real government recurrent expenditure and real tax revenue. Results from this study discovered that unemployment respond negatively to changes in real government capital expenditure but positively to real government recurrent expenditure and real tax revenue. The responses were all significant. In the short run period, real government capital expenditure showed an insignificant negative impact on unemployment. While real government recurrent expenditure exhibited a negatively and significant impact on unemployment after a year, real tax revenue impacted positively and significantly on unemployment in Nigeria. In the long run, real capital expenditure has a negative and significant impact on unemployment while real recurrent expenditure and real tax revenue exhibited positive and significant impact on unemployment rate.

A number of policy implications regarding alleviation of unemployment using the fiscal policy framework are suggested in this study. The study suggests that government should reduce the corporate tax rate as lower rates would help promote further investments through expansions by existing businesses who currently suffer from massive corporate tax burdens. Lowering the corporate tax rate in Nigeria would reduce cost of production, increase GDP and promote employment. Government should also reduce personal income tax rates that are progressive. Although this would reduce revenue inflow of the country, the tax revenue base could be broadened since many people are yet to be paying tax. As an emerging economy, Nigeria should implement policies that promote aggregate demand, boost economic growth and lower astounding rates of unemployment. Low income tax rates raise the average propensity to save as well as the households' tendency to consume thereby increasing aggregate demand. Government should emulate the relatively low personal income tax rates adopted by other emerging economies. More so, this study suggests that government should increase real capital expenditure geared towards investment (such as infrastructure system development). It should be done in a way that a greater percentage of the annual budget be allocated to capital expenditure and reduce government recurrent expenditure (like debt servicing and social grants) if it needs to lessen the high rates of unemployment in the economy.

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The Conduct of Foreign Policy as a Pursuit of National Interest: A Focus on President Buhari's Foreign Policy Initiatives 2015 – 2018.

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Abstract

The foreign policy of any sovereign nation is essentially the gamut of her relations with other countries and international organizations aimed at actualizing her national domestic objectives however defined. President Muhammadu Buhari assumed office as an elected civilian President of Nigeria on May 29, 2015 on the promises of restoring internal security that had severely deteriorated particularly in the North Eastern part of the country as a result of the insurgency of Boko Haram; fighting corruption which has almost become a way of life in the country; and revamping the economy that was facing a serious crisis as a result of the fall in the international price of crude oil the nation's economic livewire. This paper examines President Buhari's foreign policy initiatives vis-à-vis his stated domestic objectives in the last three years. To what extent has this foreign policy directives been determined by the domestic environment and how much has it impacted positively on the internal objectives. Using the methodology of content analysis of existing literature, the paper concludes that the administration has achieved some measure of success. However challenges still remain especially in the areas of fighting corruption and revitalising the nation's economy.

Keywords: *Democracy, Domestic Objectives, Foreign Policy, Nigeria*

JEL Classification: O24

1. Introduction

The concept of foreign policy like other social science concepts, defies one universally accepted definition. In the words of Wilkenfeld et al. (1980, 22):

(...) foreign policy may be viewed as those official actions (and reactions) which sovereign states initiate (or receive and subsequently react to) for the purpose of altering or creating a condition (or problem) outside their territorial-sovereign boundaries.

Frankel (1975:9) sees foreign policy as a dynamic process of interaction between the changing domestic demand and supports and the changing external environments. To Chibundu (2004) foreign policy simply implies how a country responds with other countries

beyond its shores or territories. It encompasses diplomacy, the military, trade, the economy, social, cultural, educational, sporting aspects, etc. According to Mbachu (2008), foreign policy is a “set of goals and course of actions a nation wishes to pursue or pursues in respect to the demands or interactions of the internal and external settings as perceived by the decision makers”. To Holsti cited in Olusola, (2015) foreign policy can be viewed as “actions of a state towards external environment and the conditions under which their actions are formulated”. In spite of the various definitions of foreign policy, there is a common recognition that foreign policy is about national goals and the means and ways of propagating and achieving them. It is not only a byproduct of the external force to which it is directed, but it is also as much determined by domestic factors and forces (Birai, 1983:115). This implies that foreign policies are articulated by decision makers or state actors in line with the state’s objectives which are determined by both internal and external factors. In view of the foregoing, foreign policy can be conceived as policies which nation-states pursue in the course of their interaction at the international level to achieve goals or objectives set to advance their national interests which could be political, economic, social, cultural or military.

2. Theoretical Framework

The paper adopts the system level analysis as propounded by Kenneth Waltz (1979) as its theoretical framework. The theory is predicated on the analysis that: if the individual level is the focus, then the personality, perceptions, choices and activities of individual decision makers and individual participants provide the explanation; if the state-level, or domestic, factors are the focus, then the explanation is derived from the characteristics of the state: the type of government, the type of economic system or interest groups; if the international level is the focus, then the explanation rests with the anarchic characteristics of that system or with international and regional organizations and their strengths and weaknesses (Mingst and Arreguin-Toft, 2010).

International politics, to Waltz, is the interplay between personalities and the domestic environment vis-a-vis international politics. The three variables are interloping. To Rosenau (1966), personality is the first and most important factor that dictates foreign policy action. President Muhammadu Buhari is a revered personality locally and in the international scene. He has endeared himself to his people and the world due to his personality as an upright and incorruptible person. He was described by America’s President Barrack Obama as a person with “high integrity” and “a very clear agenda” (Daily Independent, 2015). It is these outstanding qualities and traits of Buhari that informed world leaders to invite him to meetings aimed at charting a new course for Nigeria under his leadership. Buhari enjoys this cooperation and pledges of assistance and investments due to his personality. Nigeria may benefit from this enhanced cooperation and boost its economic potentials using these renewed commitments of world leaders.

At the state level however, the Buhari administration must arrest some of the internal contradictions within. There is an intricate relationship between domestic environment and politics at the international level. At the state level, Nigeria is facing internal challenges, which, to some extent, affect businesses and Nigeria’s corporate existence as one indivisible entity. These contradictions include poverty and unemployment, insecurity, corruption, debt

overhang, the need for strong institutions, especially in fiscal, financial and judicial sectors, and the need for honest leaders and good governance (Okonjo-Iweala, 2011). Bad governance at the domestic level is partly responsible for the massive exodus of Nigerians to other countries in search of greener pastures, who are sometimes caught in wrong doings and giving the country a bad image (Uhomoihbi, 2011). Nigeria cannot attain greater heights in an environment that is characterized by such backward tendencies. The country cannot project its foreign policy goals and this will have a negative effect on the nation's drive for increased Foreign Direct Investment (FDI). Investors, both local and international, will not have confidence in an insecure environment. Security, the fight against corruption and economic rejuvenation which aim at attracting FDI are the cardinal agenda of the Buhari administration. The current stance of the government in the fight against corruption and insecurity is a good omen towards making the country investor-friendly. All efforts are geared towards achieving Nigeria's foreign policy goals.

At the international level too, politics is all about power and the pursuit of national interests. The international system is anarchic and characterized by intense competition among nation-states. The Buhari administration should seek for more international cooperation from friendly nations, donor agencies and Nigerians in diaspora. At the international level, Nigeria belongs to several organizations that are both political and economic in nature. Its position as the country with the largest population in Africa and vast mineral deposits in virtually all the states are factors which, if properly utilized by the Buhari administration, could achieve the desired goal considering the support his administration is receiving from other states.

However, Waltz's system level analysis has its own limitations. The theory fails to acknowledge the fact that international politics is anarchic and the level of competition may deprive nations from competing favorably as countries must be endowed with strong leadership and corresponding economy to survive at the international arena. The theory does not also take cognizance of domestic actors and non state actors in the interplay of international politics and the assumption that national interests of state actors are predefined in terms of maximizing power suggest that the level of analysis takes an overtly top down, holistic view (Tamaki, 2015). Waltz's view that international politics is functionally coherent and immune from inherent contradictions is not always not plausible. The international system is plagued by friction among the dominant and weak actors.

3. Nigeria's Foreign Policy Objectives

Nigeria's quest to interact with other states beyond its boundary is defined in what is known as Nigeria's foreign policy objective. Its main thrusts are as follows: self preservation of the country; defense and the maintenance of the country's independence; economic and social wellbeing; defense and the preservation and promotion of democratic values; enhancing Nigeria's stance and status in the world and promotion of world peace (Aluko as cited in Tunde, Sanusi and Omotayo, 2015:62).

4. State of Nigeria's Domestic Environment under the Buhari Administration.

The Buhari administration gained political power during one of the most critical times in Nigeria's history. The government is confronted with challenges built up by decades of mismanagement and maladministration (Omale 2016). Indeed, it appears that 'the chickens

have come home to roost', because at this time, Nigeria is facing perhaps, the most difficult internal security problem in its history, coupled with the challenge of the worst economic recession in twenty-five years (Ishiekwene 2016). Furthermore, the challenges are compounded by limited resources, especially as a result of overdependence on income from the sale of petroleum products which is currently experiencing low prices at the international market. The problems are multiplied by the pressures exerted on the state by various groups; political, economic, religious and ethnic, struggling to attract government's attention. On the basis of these, the Buhari administration had its work cut out for it from the outset. The major thrusts of the administration's domestic policies are; revamping the domestic economy, ensuring protection of lives and properties as a response to the spate of security issues across the country, and lastly, ending corrupt practices (prosecuting corrupt cases and preventing the act of corruption at the highest level).

On assumption of office of the Buhari administration on May 29th, 2015, the Nigerian economy has become the biggest economy in Africa (Vanguard 2016). Despite this accolade though, conditions of the critical sectors of the economy are debilitating, causing untold hardship for generality of the people, who have to face rising inflation, while purchasing power continues to reduce drastically. The Buhari administration has to contend with great external shock induced by the heavy drop in global oil prices. As a result, "the Nigerian government faces a budget deficit of more than \$11 billion" (Scott 2016). This was compounded by the activities of 'economic saboteurs' who disrupt the flow of oil production thereby causing reduction in the daily production of Nigeria's major income earner (crude-oil). With a huge deficit inherited from the Jonathan administration (Tukur 2015), it is no surprise that the Nigerian economy entered into recession for the first time in twenty-five years. Government is unable to meet up with its obligation in terms of recurrent expenditure, while being unable to embark on capital projects. These problems have led to soaring inflation, unemployment and reduction in purchasing power of ordinary Nigerians.

The security challenge of the country has an international dimension. The Boko Haram insurgency in the North-Eastern part of the country brought global attention to Nigeria through both its activities in Nigeria, and other countries within West Africa. Dating back to 2010, the Boko Haram group continues to unleash terror and mayhem on institutions and individuals across the northern part of the country. Prior to the commencement of the Buhari administration, the country was besieged by the criminal activities of the group, among which was the sacking of, and hoisting its flag in Damboa community, the bombing of the Police headquarters in Abuja, the attack on the UN office in Abuja, and other daring bombings of 'soft' targets (Smith 2014). Perhaps the dominant discourse in the activities of the group so far, is the brazen act of insolence with which the group invaded and abducted two hundred and seventy-six secondary school girls in a night at Chibok, Borno state in April, 2014 (BBC News 2016). Despite the global outcry against this action, the group kept majority of the school children in captivity for more than two years after. All attempts by then Nigerian government to rescue the school children failed. This is the unenviable burden inherited by the Buhari administration from the Jonathan administration. Based on its campaign promises, the Buhari administration immediately swung into action to address the Boko Haram menace upon assumption of office. In relative terms, the Buhari

administration's success in the short-term has surpassed whatever was achieved under the Jonathan administration. While majority of the Chibok girls are still in captivity, no fewer than 16,000 Boko Haram hostages have been freed from the terrorists' captivity, including 106 of the Chibok girls abducted in 2014 and 105 of the Dapchi schoolgirls abducted in February, 2018. And there is a drastic reduction in the capacity of the Boko Haram group to wreck havoc. On record, the group has been chased out of its fortress in the Sambisa Forest of the North-East part of Nigeria. Whatever capacity remains for the group is now expended on low-level attacks against 'soft' targets in Nigeria and neighbouring countries (Vandiver 2016).

Aside from the high incidences of kidnapping and other regular challenges of insecurity, the Buhari administration was equally faced with the activities of economic saboteurs from the South-South geo-political zone of the country. The Niger Delta Avengers is the umbrella body of disgruntled elements in the South-South bent on causing government's attention to bear on the economic, environmental and social conditions of the area. The group's method is to disrupt oil production by blowing up pipe-lines that serve as conduit in the production of crude oil for the international market (Hinshaw and Kent 2016). This act of economic sabotage continues to cost Nigeria the much needed revenue, especially at a time when the world is witnessing great reduction in the prices of crude-oil at the international market. Concerned about the negative implications of their activities, the government continually makes efforts to 'pacify' the group by focussing attention on the development of the area. For instance, a reversal of the despoliation of their lands is being undertaken through the 'Ogoniland Clean' project (Alike 2016). As the administration engages the Niger Delta people in solving the problems in the area, there is a noticeable reduction in the negative activities of the Avengers, with direct impact on oil production, and positive implications on revenue accruing to government.

Deriving from the President's publicly declared hatred against acts of corruption, the administration made the fight against corruption a pivotal part of its domestic policy. With a focus on investigation and prosecution of corruption cases, the Buhari government deploys the anti-corruption institutions of state; the Economic and Financial Crimes Commission (EFCC) and the Independent Corrupt Practices Commission (ICPC) to handle corrupt cases, while putting machinery in motion for blocking loopholes used for corrupt practices. Remarkably, numerous corrupt practices of government officials under the erstwhile Jonathan administration have been uncovered, and the processes of prosecution are ongoing. These three critical issues; economic revival, provision of adequate security, and the fight against corruption have formed an appreciable part of the basis upon which the Buhari administration has engaged the rest of the world since its inception.

5. Nigeria's Foreign Relations under President Buhari

The Buhari administration was under no illusion that it could solve the multiplicity of problems confronting Nigeria without concrete engagement with the international community. Though not comparable in terms of frequency and number of times as was with President Olusegun Obasanjo in his first term of office, nonetheless President Buhari equally embarked on high-power 'Shuttle Diplomacy' in his first year of assumption of office. The purpose of the shuttles, which have been at both bilateral and multilateral levels

are tied to solving the domestic challenges of economic recovery, insecurity and fight against corruption.

Shortly after assumption of office, the President undertook a tour of member-states of the Lake Chad Basin Commission in West Africa that are equally affected by the activities of Boko Haram. For the purpose, the President also visited France because of France's interest in West Africa, as a result of the close affinities with her former colonies. The visits were meant to seek collaboration, cooperation and assistance of the various governments in tackling the Boko Haram menace. In line with the government's determination, the Boko Haram terror issue featured prominently in the president's discussion with the US authorities on his official visit to America. In the final analysis, the contacts made with various governments yielded result in the mould of the Multinational Joint Task Force (MNJTF) (Assanvo et al. 2016). At present, the Boko Haram terrorist group has been seriously decimated (Somorin 2016) with its existence hinged only on attacks on 'soft' targets.

In an attempt to tackle Nigeria's economic problems, the president has been visible on the world stage, attempting to sell Nigeria as a haven of business opportunities to governments and corporations around the world. Indeed, the president has left the space wide open by not discriminating against any part of the world, either on the basis of ideology or religion. In the search for FDI, the president has made both bilateral and multilateral visits to Europe (France, Germany, Britain), the US, China, United Arab Emirate, Saudi Arabia, amongst many other countries. Some of the efforts have generated visible results, for instance, "the secured commitments for investments worth \$6billion from the Chinese government and private companies most of whom signed Memoranda of Understanding (MoU) with the Nigerian government as well as private companies" (Akwaya 2016). With the monetary and fiscal policies of government, in addition to the giant strides the government has made in establishing contacts and building the confidence of foreign investors, the government has succeeded in pulling the Nigerian economy out of recession. While the economy is still in a bad shape, there are signals that it is on its way to recovery in a relatively short while.

Finally, in this regard, the Buhari administration aggressively sought for commitment and cooperation of the international community in fighting high-level corruption at home. Specifically, the government continually canvasses and lobbies foreign governments, especially in the West where much monies carted away by Nigerian government officials are stashed. The cooperation of the foreign governments is sought in the area of refusal to provide safe havens for stolen wealth from Africa. Furthermore, the government is on an aggressive campaign of repatriation of stolen wealth that is already stashed abroad. The president's trips abroad are meant to win loyalty of the foreign governments in this regard. One of such shows of support came from the government of the United Arab Emirate as demonstrated in the signing of a bilateral agreement that details the willingness of the UAE to "facilitate the extradition of wanted persons, and seizure of stolen assets among others" (Akwaya 2016). In the quest for a corruption-free Nigeria, the president played a visible role at the London 2016 Anti-Corruption Summit, where emphasis was laid on erecting a strong global coalition against corrupt practices (Wakili 2016).

While the Buhari administration displayed elements of determination and commitment in deploying foreign policy to solve the various challenges at home, the government has equally been alive to its responsibility to the sub-region, in line with the underlying principles of national interest. This is evidenced in the material and technical support provided for the following countries during their elections; Benin Republic, Burkina Faso, Chad and Guinea Conakry. Most recently, the Nigerian government played a significant role as a leading member of ECOWAS to solve an impending political imbroglio in the Gambia. The group ensured that the recalcitrant former President Yahya Jammeh vacated office for the democratically elected President Adama Barrow. From all indications, Nigeria, Senegal, Liberia and Ghana, under the auspices of ECOWAS, would have implemented a forceful removal of Yahya Jammeh from office (Freeman 2016).

Equally important in the foreign policy drive is the extent to which President Buhari is willing to make Nigeria relevant in international politics. In most international forums, the president leads the Nigerian delegation, thereby creating visibility for the office of the President of Nigeria and by extension, enhancing the country's image. In this regard, the President has attended and addressed, the UN General Assembly, the African Union Heads of State and Government meeting, the Heads of State and Government Meeting of ECOWAS, the Commonwealth Heads of Government Meeting, the COP21 Climate Change Summit, the China-Africa Conference, the Nuclear Security Summit, among numerous others (Akwaya 2016).

Despite the commendable efforts so far made on the foreign policy arena, especially as they relate to achieving positive outcomes in the domestic policy pursuits, the Buhari administration is relatively weak in terms of the pursuit of a concrete diplomatic agenda. It is an irrefutable fact that diplomacy is one of the most critical instruments of foreign policy, hence, the need to accord high level of importance to Nigeria's diplomatic practice. A recurring albatross of Nigeria's diplomatic practice is the lack of funds experienced by many of the diplomatic missions in various capitals of the world (Aremu 2016, 534). This unacceptable practice hinders the capacity of the missions to carry out their responsibilities effectively and efficiently, with negative consequences on the efforts made by government from home. The government appears to be addressing the challenge by shutting down some of the diplomatic missions that are considered unviable (Salawu and Echewofun 2016) perhaps so that funds can be made available to the diplomatic missions in capitals presumed to be of strategic importance to Nigeria's national interest. This position may appear logical on the surface, it however impedes government's efforts in taking advantage of opportunities across the globe. With the dynamic nature of globalisation, there is a sense in keeping diplomatic relations with as many state actors as possible, for the possibility of the strategic importance of a state may arise at short notice. Moreover, given the itinerant nature of the average Nigerian, government must be conscious of providing representation in as many countries as possible.

A related development in this regard is the slow pace of appointing Ambassadors and High Commissioners to head the various diplomatic missions. As a critical element of foreign policy pursuit, the diplomatic machinery must be fortified to the highest level. A situation in which appointment of the country's highest representatives take too long to be finalized it

does not bode well for the relationship between Nigeria and the country starved of the highest level representative. It is therefore imperative for both the executive and legislature to harmonize the processes of nominating, confirming, and approving Nigeria's highest ranking representatives abroad.

6. Conclusion and Recommendations.

In conclusion, it is obvious that the President Muhammadu Buhari regime has achieved some level of success in the last three years in pursuing a foreign policy agenda that seeks to address the administration's stated domestic objectives. However, a lot more could have been achieved if the commitments and promises made by the country's international friends and partners had been redeemed and fully actualized. For instance on fight against corruption, it is only a fraction of the country's stolen wealth that was stashed away in foreign lands that have retrieved. The West has been particularly sluggish in co-operating with the regime in returning these monies.

Taking a look at fighting insecurity, while it is true that the 'Boko Haram' insurgents in the North East have been heavily degraded in their deadly and incessant attacks, they still remain a dangerous armed group with capacity to inflict damages on the people and the security agencies. Worse still, insecurity appears to be spreading to other parts of the country especially the North West and North Central. Armed bandits, kidnapers for ransome, cattle rustlers and farmers/herdsmen conflicts have all contributed in escalating the state of insecurity in the country. Unfortunately the assurances of military and intelligence support that the president got from the Western countries have remain largely what they were: promises. Even the reinforcement of the ECOWAS Multi-National Joint Task Force (MNJTF) has not succeeded in checkmating the movement of these armed groups across our common borders. In the area of economy, the expected inflow of Foreign Direct Investments FDI, is not forthcoming as much as expected. The heightened state of insecurity in the country coupled with competition from other investment destinations can be said to be responsible for this. The poor state of our infrastructures has equally made the cost of doing business in Nigeria to be high.

For better results in pursuit of her foreign policy objectives, the Muhammadu Buhari regime should shift emphasis away from some of our traditional international friends who only pay lip service in terms of their partnership with Nigeria. So far these relationships have been lopsided against Nigeria. The country should strengthen our relations more with those who are willing to partner with us so that we can develop and improve the living condition of our people. President Buhari should equally focus more attention in making the domestic environment more conducive for doing business. Some efforts at infrastructural development are being made especially with the support from China. Also, Nigeria should strengthen it ties with middle level economic powers like the Asian Tigers, Brazil and countries on the African continent to portend greater benefit for our country. At all times our focus in our dealings with other countries should remain what is in our best interest. After all, in international relations there are no permanent friends nor permanent enemies but permanent interests.

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Analysing the Role of Public Infrastructure Spending on the Nigerian Economy

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Abstract

This study is an empirical investigation of the role of government infrastructure spending on the Nigerian economy. To achieve this, a model was formulated to empirically analyze the role of government infrastructure spending on the Nigerian economy using Ordinary Least Square (OLS) technique with statistical test of significance. The variables used were Aids and Grants on infrastructure (AGI), Government capital expenditure on infrastructure (GCEX), external debt financing (EXD) and gross fixed capital formation (GFCF) and GDP. The five variables (GDP, CGEXP, RGEXP and GFCF) were subjected to unit root test using the Augmented Dickey-Fuller (ADF) test. As is the case most times, four variables were found to be non-stationary but were stationary after first difference i.e. integrated of order one; $I(1)$. EXD was stationary at level. The cointegration test was done using Engel-Granger and Philips-Oularis cointegration test. Both test are single equation test suitable for this study. Engel-Granger and Philips-Oularis cointegration test indicated the variables are cointegrated at 1% level of significance. This shows that the variables have a long-run equilibrium relationship. The OLS result obtained showed that Aids and Grants on infrastructure (AGI) have a positive impact on GDP, with the impact being statistically insignificant. Government Capital Expenditure (GCEX) have a positive and statistically significant impact on GDP. External Debt Financing (EXD) have a negative and statistically insignificant impact on GDP. Based on the conclusion the study recommends that government should ensure that capital expenditure is properly managed in a manner that it will raise the nation's production capacity and promote infrastructure development.

Keywords: Public, Capital Expenditure, Economic Growth, Nigeria

JEL Classification: E62, O47

1. Introduction

Scholars argue that increase in public capital expenditure on socio-economic and physical infrastructures encourage economic growth. For example, public expenditure on health and education raises the productivity of labour and increases the growth of national output. Similarly, capital expenditure on infrastructure such as roads, communications, power, etc, reduces production costs, increases private sector investment and profitability of firms, thus

fostering economic growth. As observed by Afzal and Abbas (2010), Ajayi (2010), Ekpo (2014) and Fan and Rao (2003) expansion of public capital expenditure contributes positively to economic growth.

In Okojie, (2015), the general view is that public expenditure either recurrent or capital expenditure, notably on social and economic infrastructure can be growth-enhancing. Provision of infrastructure services to meet the demands of business, households, and other users is one of the major challenges of economic development in developing countries like Nigeria. Developing countries invest about \$200billion a year in new infrastructure representing four percent of their national output and a fifth of their total investment. The result has been a dramatic increase in infrastructure services-for transport, power, water, sanitation, telecommunications, and irrigation (World Bank Development Report, 2010). Government spending in Nigeria has continued to rise due to the huge receipts from production and sales of crude oil, and the increased demand for public (utilities) goods like roads, communication, power, education and health. There is increasing need to provide both internal and external security for the people and the nation. Available statistics show that total public capital expenditure and its components have continued to rise in the last three decades. For instance, capital expenditure rose from N10, 163.40 million in 1980 to N24, 048.60 million in 1990. Capital expenditure stood at N239,450.90 million and N759, 323.00 million in 2000 and 2007 respectively, while in 2010 it stood at N883,870 million and N1,108,377 billion in 2013 and N1,813,931 in 2015. The various components of capital expenditure have risen between 1980 and 2015.

However, the rising public expenditure may have not translated to meaningful growth and development, as Nigeria is categorized with LDC's among other countries in the world. In addition, many Nigerians have continued to wallow in abject poverty, while more than fifty percent live on less than US\$1per day (Omitogun and Ayinla 2017). Moreover, infrastructure like roads, electricity, healthcare, etc reveals that Nigeria has not fared well in the last three decades. It is disturbing to note that public capital expenditure seems to have not replicated same level of economic growth in Nigeria, for instance between 1980 and 1990, while the GDP growth rate was decreasing from 57.15% down to 2.87%, public expenditure growth rate was increasing (23.2% to 41.24%). Thus, there is an inverse relationship between the two periods (Nurudeen and Abdullahi, 2010).

The economy is a large component with lot of diverse and sometimes complex parts; this research work will only look at a particular part of the economy (the fiscal sector). This work cannot cover all the facets that make up the fiscal sector, but will look at government capital expenditure on infrastructure and its impact on development of the Nigerian economy.

The empirical analysis and estimation covers the period between 1970 and 2016. This restriction is to enable us assess the impact of capital expenditure on infrastructure for the development of Nigerian economy from the period of oil boom till date.

2. Literature Review

2.1 Literature Review

There are many studies on the role of government spending in the long-term growth of national economies. However, there exists no consistent evidence for significant relationship between public expenditure and economic growth, in positive or negative direction. Results and evidence about effects of government expenditure or spending on economic growth differ by country or region, analytical method employed and classification of public expenditures. There are various empirical studies on the growth effects of government spending based on the experiences of some developed countries.

Aregbeyen (2010) studied the productivity of government expenditure using data from the 1949 to 1985. Using the production functions, he compared productivity of government expenditure on the military capital, non-military capital and infrastructural expenditure. The study demonstrated that expenditure on non-military stock of capital was more productive than the expenditure on military stock and that government expenditure on infrastructures such as roads, bridges, dams, etc, are economic growth stimulating. Nurudeen and Abdulahi (2010) explored the rational for governments' investments into science and technologies. Gannon posits that "if you want to harvest in autumn, you need to sow in spring. This ancient saying holds true not only for agriculture, but for all economic activities". When we changed the scenario from agriculture to economic growth in terms of employment level, per capita income, export, etc. sowing can be viewed in terms of private and public investments. In the context of the present scenario, sowing refers to investment in research and development as a percentage of the GDP. It is argued that the higher the level of investment in science and technology as the percentage of the GDP, the higher the level of economic growth.

Olopade and Olopade (2010) studied why government expenditure does not stimulate economic growth. In this study, they considered the myth of government spending to stimulate growth. He argued that the more government spending is, the higher the level of taxation from the public and therefore the more transfer payment are made. He argued that increasing productivity requires increasing material capital and human capital. Improved functioning of the market is another important ingredient that stimulates growth and productivity. Omitogun and Ayinla (2017) studied the impact of government expenditure on economic growth. The study made use of the neoclassical production function. It incorporated not only the size of government but the quality of governance. The study used generalized moment method (GMM). The size of the government was measured based on the size of government expenditure. The quality of governance was based on the quality of decision-making paradigm. The study made use of 71 countries. The study demonstrates that both the size and the quality of governance have impact on the level of economic growth. Oyejide (2013) used panel data for 14 developed countries (1970-1990) and applied a method of OLS. 5-year moving average. The study took various functional types of expenditure (health, education, transport, etc) as explanatory variables and found that health, transport and communication have significant positive effect while education and defense have a negative impact on economic growth.

Dikenson (2006) provide empirical evidence on the impact of economy of fiscal policy on long run growth for European economy. Their study required that at least two of the taxation/expenditure/deficit effects must be examined simultaneously and they employed panel and time series econometric techniques, including dealing with the endogeneity of fiscal policy. Their broad conclusions are: Some public investment spending impacts positively on growth and consumption and social security spending have zero or negative growth effects. Mitchell (2005) evaluated the impact of government spending on economic performance in developed countries. He assessed the international evidence, reviewed the latest academic research and cited examples of countries that had significantly reduced government spending as a share of national output and analyzed the economic consequences of these reforms. Regardless of the methodology or model employed, he concluded that a large and growing government is not conducive to better to economic performance. Weil (2009) used cross section data for a larger sample of 115 countries and time-series data (1960-1980) for 17 individual countries to see the effect of government size on economic growth. Estimation was done with OLS and also on the premise of a first-order autoregressive disturbance term (ART) for some countries from time series data; (4) it is possible that the positive effect of government size on growth is strong in lower income contexts.

The above empirical studies have little relevance in understanding the process by which public expenditure policies shape the prospect of economic growth for developing countries as there are no only a significant difference in the composition of public expenditure between developed and developing countries, but the difference is also profound in the role of public expenditures for growth (World Bank 2010). Thus exclusive focus on developing countries is imperative. Afzel and Abbas (2010) studied the relationship between government expenditure and economic growth in Saudi Arabia. He classified government expenditure into investment (GI), government expenditure (GE) and government consumption (GC). Using the error correction method (VEC model), he demonstrated that both government investment (GI) and government expenditure (GE) have significant impact on economic growth in Saudi Arabia but government consumption expenditure did not have a significant impact on economic growth during the period of 1964 to 1995. Gregoriou and Ghosh (2007) studied the impact of government expenditure growth using heterogeneous panel of developing countries. The method of analysis employed was the Generalized Method of Moment (GMM). The data employed covered the period of 1977 to 1999 and was derived from the Global Development Network Database, compiled by William Easterly. The study demonstrated that in some countries with fast growing economics such as Brazil, the capital expenditure stimulates economic growth than in the less developed countries such as Sudan.

Olopade and Olopade (2010) examined the trends as well as the effects of government spending on the growth rate of real GDP in Nigeria for the period of 1970 - 2008, using the time-series methodology of unit root test, cointegration and ordinary least square (OLS) analysis. The real GDP was used as the dependent variable while government capital and recurrent expenditures were used as independent variables. The results showed that both recurrent and capital expenditures exhibited significant and positive relationship on the real

GDP. Oyinlola (2013) examined empirically the contribution of fiscal policy in achieving sustainable economic growth in Nigeria. The study investigated the impact of deficit finance on the level of economic growth in Nigeria. The result demonstrates that fiscal policy has no impact on economic growth in Nigeria. Medee and Nembee, (2011) estimated the impact of government expenditure on economic growth in developing countries, using a panel data of 17 developing countries, covering a time-series period of 1990-2007, and random effect model. The study establishes that government consumption expenditure significantly depresses economic growth while trade openness and government investment have positive but insignificant effect on economic growth. Oxley (2014) provides further evidence on the relationship between economic growth and government spending. In this study, two different data methods were applied to seven transition economies in the south eastern (SEE) Europe. The results indicated that four out of the five variables used in the estimation, that is, government spending on capital formation, development assistance, private investment and trade openness all have positive and significant effect on economic growth. Population has no effect on economic growth.

Chete and Adeoye, (2016) examined, if the relative size of government (measured as the share of total government expenditure) in GNP could be determined to granger cause the rate of economic growth or if the rate of economic growth could be determined to granger cause the size of government. Bivariate error correction (BEC) model was used within granger causality framework. Unemployment and inflation were used as dependent variables. Using data on Greece, United Kingdom (UK) and Ireland, the analysis showed that government size granger causes economic growth in all countries of the sample in the short-run and in the long-run for Ireland and UK. The analysis also showed that economic growth granger causes increase in the relative size of government in Greece, and, when inflation is included in the UK.

Ajayi (2010) investigated the growth effect of government expenditure on economic growth in Nigeria over the period of 1980-2008, focusing on sectorial expenditures. The sectors included security, health, education, transportation/communication and agriculture. Johanson co-integration technique of regression analysis was used. The result depicts that expenditures on health, national security, transportation/communication were positively related to economic growth. Expenditure on agriculture in the short-run was not significant. Education also showed negative relationship. Ekpo (2014) investigated the impact of public expenditures on economic growth using OLS method for a sample of time series data on Tanzania (for 32 years). They found that increased productive expenditure is associated with lower growth. According to them, this negative relationship suggests the inefficiency associated with the use of public funds and public investments in Tanzania. The negative associate between total government expenditure and growth also seems to indicate the unproductive effect of government investment spending. Consumption expenditure relates negatively to growth, as anticipated, but appears to be associated with increased private consumption. They also found that there is positive link between growth and expenditure on human capital.

2.2 Theoretical Framework

Public expenditure theory, traditionally, received only a scanty attention till recently. Partly, this lop-sided interest in the theory of public finance is explained by a general acceptance of the philosophy of laissez-faire and belief in the efficacy of free market mechanism. However, with the advent of welfare economics, the role of the state has expanded especially in the area of infrastructural provision and theory of public expenditure is attracting increasing attention. Therefore, this research work adopts the Peacock and Wiseman theory of public expenditure as its theoretical framework.

Peacock and Wiseman analyze the process of growth of public expenditure in terms of three different but related concepts; displacement, inspection and concentration effects. By the empirical analysis of the data of Britain on public expenditure, they were able to establish the relative growth of public sector expenditure in that country occurred on “step-like” pattern rather than on “continuous growth” pattern. They have discussed this hypothesis under three effects separately.

2.2.1 Displacement Effect

The public expenditure increases and makes the inadequacy of the present revenue. Then a movement must take place so that the older level of expenditure and taxation to a new and higher level is the displacement effect. During the period of emergency or of major social disturbances such as war and depression that most of the upward steps in public expenditure had occurred. Displacement Effect is the process by which the previous lower expenditure levels are displaced by new and higher level of expenditure.

2.2.2 Inspection Effect

The inspection effect refers to the phenomenon where by a direct consequence of the social emergency, public expenditure comes to increase which may be insufficient compared to the revenue of the government, creates the inspection effect. The government and people review the revenue position and to find the solution of the important problems that have come up with gently to attain the new level of tax tolerance. They are now ready to tolerate a greater burden of taxation and, as a result, the general level of expenditure and revenue goes up. In such a way new level of expenditure and revenue come to stabilize at a new level till the new disturbance occurs to cause the displacement effect.

2.2.3 Concentration Effect

The concentration effect also refers to the apparent tendency for central government economic activity to grow faster than that of the state and local level government. This is found fitted there in British economy but it is not needed to verify this to other countries. This concept is the evolution of expenditure undertaken at different levels of government and their tendency to be concentrated in central government. This usually happens when the country is experiencing economic growth.

The main concentration of the Peacock-Wiseman hypothesis is that factors, both endogenous and exogenous to the economic system, exert a force influence on public sector institutions to increase their expenditure over a secular period and this increase occurs on a step-like basis and at a faster rate than the growth in aggregate economic activities.

Peacock and Wiseman's Theory of Expenditure Peacock and Wiseman's study is probably one of the best known analyses of the time pattern of public expenditures. They founded their analyses upon a political theory of public determination namely that government likes to spend more money and citizens do not like to pay taxes, and that government needs to pay some attention to the wishes of its citizens. The duo saw taxation as setting a constraint on government expenditure. As the economy and thus incomes grew, tax revenue at constant tax rate would rise; thereby enabling public expenditure would show a gradual upward trend even though within the economy there might be a divergence between what people regarded as being desirable level of public expenditure and the desirable level of taxation. During the periods of social upheaval however, this gradual upward trend in public expenditure would be disturbed.

These periods would coincide with war, famine or some large-scale social disaster, which would require a rapid increase in public expenditures; the government would be forced to raise taxation levies. The rise of taxation levels would, however, is regarded as acceptable to the people during the period of crisis. Peacock and Wiseman refer to this as the "displacement effect". Public expenditure is displaced upwards and for the period of the crisis displaced private for public expenditure does not however fall to its original level. A war is not paid for from taxation; no nation has such large taxable capacity. Countries therefore borrow and debt charges have to be not after the event. The government therefore expands its scope of services to improve these social conditions and because people perception to tolerable levels of taxation does not return to its former level, the government is able to finance these higher levels of expenditures originating in the expanded scope of government and debt charges.

From the analysis, public expenditure has much influence on economic of a country, Nigeria as a case study which might be positive or negative as the outcome maybe.

3. Methodology

This study employs simple regression as a technique to measure the impact of infrastructure spending on the Nigerian economy. The methodology in this study aimed at establishing a quantitative relationship between some macroeconomic variables in Nigeria. To this end, data on these variables were collected from relevant sources and used for the study. The parameters of the various models would be computed and used to test the hypotheses concerning infrastructure spending on the Nigerian economy. The purpose of the study was to know how it assists directly or indirectly in economic and social development, and basic facilities. The existence of an adequate commercial base helped to attract foreign investors into the country. Foreigners would be encouraged to invest in the country since production would be carried out efficiently.

3.1 Model Specification

The models that were be used for the purpose of this research are presented below. These models are formulated based on the hypothesis that was specified in the first chapter of this research. To specify the model appropriately, Peacock and Wiseman's Theory of Expenditure Peacock and Wiseman's model was used as the theoretical foundation due to its

relevance to government expenditures and economic growth. Therefore a Model was adapted from the study of Samimi and Habibian (2011).

The model shows the impact of government capital expenditure, recurrent government expenditure and gross fixed capital formation on gross domestic product because they constitute the formation of the total government expenditure and economic growth in Nigerian economy, however the gross fixed capital formation forms the basis and uniqueness for this study.

MODEL: The model specifies that gross domestic product depends on government capital expenditure, aids and grants on infrastructure development, external debt and gross fixed capital formation depends. It is presented as:

$$\begin{aligned} \text{GDP} &= F(\text{CGEXP}, \text{AGI}, \text{EXD}, \text{GFCF}) \dots\dots\dots 1 \\ \text{GDP} &= a_0 + a_1\text{CGEXP} + a_2\text{AGI} + a_3\text{ED} + a_4\text{GFCF} + U \dots\dots\dots 2 \\ a_0 > 0, a_1 > 0, a_2 > 0, a_3 > 0 \text{ and } a_4 > 0 &\dots\dots\dots 3 \end{aligned}$$

Where:

- GDP = Gross Domestic Product
- CGEXP= Government Capital Expenditure on infrastructure
- AGI = Aids and Grants on Infrastructure Development
- ED = External Debt
- GFCF = Gross Fixed Capital Formation
- a₀ = Constant intercept
- a₁, a₂, a₃ = Slopes of the regressions
- U = Error term

3.2 Analytical Techniques

This study employs the Ordinary Least Square Regression Technique in the analysis of the secondary data obtained from the Central Bank of Nigeria statistical Bulletin. Various econometric and statistical measures are employed in the analysis of the data. These include the t-ratio, the Coefficient of Determination (R²), the Adjusted Coefficient of Determination (R²), F-ratio, and DW statistics. The T-ratio is used to test the significance of the estimates, while the Coefficient of Determination (R²) is used to measure the explained variation in the dependent variable. The Adjusted Coefficient of Determination (R²) is also used to measure the explained variation of the dependent variable after taking cognisance of the degree of freedom. The F-ratio is used to test the significance of the Coefficient of Determination (R²). The Durbin Watson statistics is used to test for presence or absence of autocorrelation in the random variable. To measure the long term and short term relationship, cointegration test would be conducted. Also stationary test would be carried out to test if the individual data is stationary and reliable for prediction and forecasting.

3.4 Sources of Data

This research work uses secondary data which were obtained from the Central Bank of Nigeria Statistical Bulletin. The data obtained include; Gross domestic product, Capital government expenditure, recurrent government expenditure and gross fixed capital

formation in Nigeria economy. The data will be collected for a period of thirty five years, i.e. 1990 – 2015.

4. Data Analysis and Results

4.1 Data Presentation

The data sourced for this study is secondary in nature. They are collected from the CBN statistical bulletin 2016. The scope of the data is from 1970 to 2017. The result presented in this chapter are based on all test stated in the previous chapter. All results to be analysed in this chapter are obtained from e views 9.0 software statistical packages.

4.2.1 Descriptive Statistics

The descriptive statistics as derived through E-Views 9.0 shows the Mean, Median, Maximum, Minimum, Standard Deviation, Skewness, Kurtosis, Jacque-Bera and Probability of each of the variables as presented below:

Table 4.1: Descriptive Statistics

	GDP	GFCF	GCEX	EXD	AGI
Mean	17145.79	18.16784	302.3772	6.964373	882.2434
Median	1244.690	20.59000	62.71000	1.185000	107.2300
Maximum	95878.35	31.81100	1152.800	41.30000	4859.240
Minimum	128.6100	2.481000	10.92000	0.000000	3.030000
Std. Dev.	30168.29	7.802824	366.7402	12.10457	1332.308
Skewness	1.781272	-0.207813	0.935695	1.817317	1.460325
Kurtosis	4.602264	1.878002	2.391061	4.784328	3.828691
Jarque-Bera	30.51793	2.863250	7.745819	32.78878	18.43386
Probability	0.000000	0.238920	0.020798	0.000000	0.000099
Sum	822998.1	872.0565	14514.11	334.2899	42347.68
Sum Sq. Dev.	4.28E+10	2861.551	6321424.	6886.473	83427089
Observations	48	48	48	48	48

Source: Author's Computation

From Table 4.1, all variables consist of fourth eight (48) observations. The table clearly shows the descriptive statistics of the variables indicating their mean, variance and distribution.

4.2.2 Trend Analysis

Graphically, the trend analyses showed that the variables fluctuates at one point or the other during the period under review. This was attributed to the effects of government policy and economic conditions that would have had attendant effects on some of the variables. These are presented graphically below:

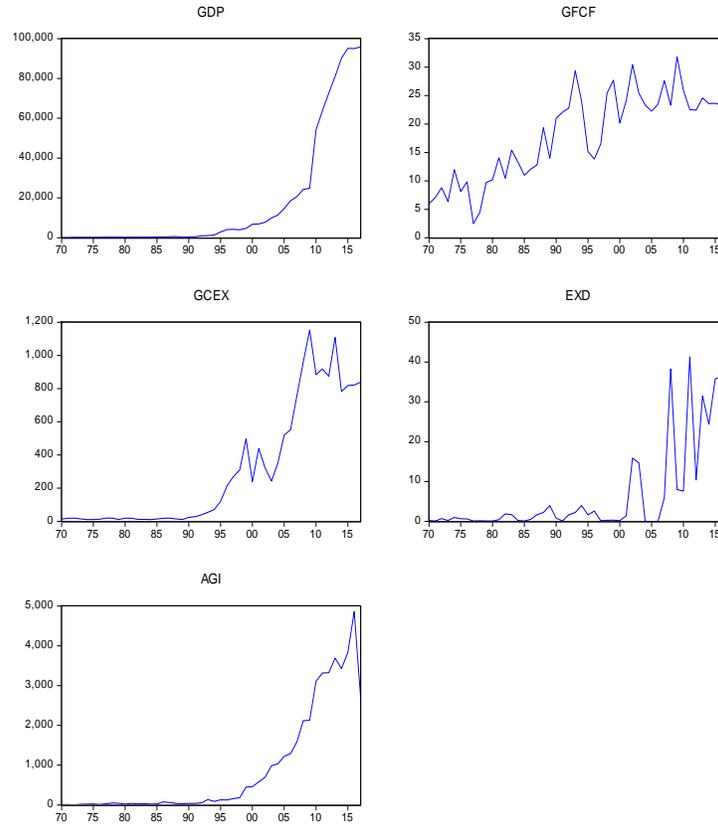


Figure 1.0 Trend Analysis

4.2.3 Stationarity Test

The Augmented Dickey-Fuller test was used to test for unit root. All the variables were regressed on trend and intercept to determine if they have trend, it was discovered that the five variables have trend and intercept, hence the unit root test involve trend and intercept. The result is presented:

Table 4.2: Unit Root Stationarity Results

Time Series	ADF Statistics	Critical Value	Stationary Status
GDP	-7.929852	-4.3943 (1%)	I(1)
		-3.6121 (5%)	
		-2.2431 (10%)	
GCEX	-6.590658	-4.3743 (1%)	I(1)
		-3.6032 (5%)	
		-3.2380 (10%)	

Time Series	ADF Statistics	Critical Value	Stationary Status
AGI	-5.860210	-4.5743 (1%)	I(1)
		-3.6920 (5%)	
		-3.2856 (10%)	
GFCF	-5.034500	-3.7379 (1%)	I(1)
		-2.9919 (5%)	
		-2.6356 (10%)	
EXD	-5.078812	-4.3561 (1%)	I(0)
		-3.5950 (5%)	
		-3.2335 (10%)	

The critical values for rejection of hypothesis of unit root were from MacKinnon (1991) as reported in eviews; Source: Author's Computation

The five variables (GDP, CGEXP, RGEXP and GFCF) were subjected to unit root test using the Augmented Dickey-Fuller (ADF) test. As is the case most times, all four variables were found to be non-stationary with different orders of integration. GDP was stationary after first difference i.e. integrated of order one; I(1), EXD was stationary at level while the remaining (GFCF, GREX and GCEX) were stationary after first difference i.e. integrated of order one; I(1).

4.3 Co-Integration test

The cointegration test was done using Engel-Granger and Philips-Oularis cointegration test. Both test are single equation test suitable for this study. The test result in presented in table 4.3.

Table 4.3: Cointegration Result

Dependent Variable: GDP

Independent Variables: GREX AGI EXD GFCF

Null hypothesis: Series are not cointegrated

Engel-Granger Cointegration Result			Philips-Oularis Cointegration Result				
Tau-statistics	P-Value	z-statistics	P-Value	Tau-Statistics	P-Value	z-statistics	P-Value
-4.6073	0.0076	-33.2906	0.0036	-4.73005	0.0016	-44.06015	0.0005

Source: E-views Results Output, 2019

From the result both the Engel-Granger and Philips-Oularis cointegration test indicated the variables are cointegrated at 1% level of significance. The P-Value for the Tau and Z statistics are less than 0.01 (1% level of significance) for both Engel-Granger and Philips-Oularis cointegration test indicating that the series are cointegrated with GDP as the dependent variable and GREX, GCEX, EXD and GFCF as the independent variables. This shows that the variables have a long-run equilibrium relationship.

4.4 Analysis of Results

Table 4.4 Regression Result
Dependent Variable: d(GDP)

Independent Variables	Coefficient	Standard Error	t-Statistic	P-Value
Constant Intercept	10340.20	1083.343	9.544715	0.0000
d(AGI)	26.44429	1.918438	13.78429	0.0000
d(GCEX)	21.20720	6.559507	3.233047	0.0038
EXD	-26.52384	52.78403	-0.502497	0.6203
d(GFCF)	470.8071	147.6066	3.189608	0.0042
R ²	0.655613	F Statistic	118.4105	0.00000
Adjusted R ²	0.647543	D-W Statistic	1.769175	

Source: E-views Results Output, 2019

From the above estimated regression result there exists a positive relationship between Gross Domestic product and all the independent variables except EXD. These relationships conform with the A priori. The estimated model has a positive intercept. The result shows that a unit increase in Aids and Grants on Infrastructure (AGI) on the average will result in a 26.44429 increase in gross domestic product (GDP) holding other variables constant. A unit increase in Government capital expenditure (GCEX) on the average will lead to 21.20720 increase in GDP holding other variables constant. A unit increase in External Debt Financing (EXD) on the average will lead to 26.52384 decrease in GDP holding other variables constant. Also, a unit increase in Gross Fixed Capital Formation (GFCF) on the average will lead to 470.8071 unit increase in GDP holding other variables constant. This shows that about 65% of variations in the dependent variable (GDP) were explained by changes in the explanatory variables of the estimated model therefore the estimated model exhibits good fit. It further shows that 35% of the fluctuations in GDP is caused by a random disturbances or exogenous variables outside the regression therefore R² is significant.

The high value of the f-statistics (ie. $F^c = 118.4105$) indicates that the parameters of the estimated model are jointly a simultaneously statistically significant. This implies that the estimated model is good for forecasting, predicting policy formulated and analysis purposes.

The theoretical t-value at 5% level of significance with forty four (44) degree of freedom is 2.064 which is less than the calculated t-values for GREX (13.78429), GCEX (3.233047) and GFCF (3.189608). We shall therefore reject the null hypothesis and accept the alternative hypothesis. This implies that the parameter estimates β_1 , β_2 and β_4 (i.e GREX, GCEX and GRFCF) are statistically significant hence, they are relevant variables that affects the Nigeria economic growth. However EXD is insignificant since its t statistic (0.502497) is less than the critical value 2.064.

4.5 Chow Test for Structural break

Table 4.5: Chow Breakpoint Test

Chow Breakpoint Test: 1985

Null Hypothesis: No breaks at specified breakpoints

Varying regressors: All equation variables

Equation Sample: 1970-2017

F-statistic	0.250078	Prob. F(2,43)	0.7799
Log likelihood ratio	0.543528	Prob. Chi-Square(2)	0.7620
Wald Statistic	0.500157	Prob. Chi-Square(2)	0.7787

Source: Author's Computation

From the result in Table 4.5, The f statistics is given as 0.250078 and its probability value is 0.7799. the probability value of the f statistics is higher than 0.05 ($0.7799 > 0.05$) thus we accept the null hypothesis of no structural break between the period 1970-1985 and 1986-2017.

5. Conclusion and Recommendations

5.1 Conclusion

From the summary, it is very evident that government infrastructure spending affects economic growth significantly. It is therefore concluded that government's spending and fiscal stance should be based on transparency and integrity to bring about inclusive growth. In countries like Nigeria, where public spending occupies a larger share of the economy, increase in spending will almost by definition increase the major component of output, and this may well produce financing for both public and private sector. This study has shown that government expenditure components such as capital expenditure, aids and grants on infrastructure and gross fixed capital formation, all have significant and positive impact on economic growth. However, external debt financing has a negative but insignificant impact on economic growth. On the whole government expenditure is vital for the growth and development of Nigeria.

5.2 Recommendations

Based on the conclusion, the study recommends the following:

- Government should ensure that capital expenditure is properly managed in a manner that it will raise the nation's production capacity and promote infrastructure development.
- Government should direct its expenditure towards the productive sectors like manufacturing and industry as it would increase production and output as well as raise the living standard of the poor the country.
- Effort should be made to increase government funding on education and health to curtail the level of strike in our education sector and as well increase funding on anti-graft or anticorruption agencies like the Economic and Financial Crime Commission (EFCC), and the Independent Corrupt Practices Commission (ICPC) in order to arrest and penalize those who divert and embezzle public funds.
- A proper surveillance on capital spending is required in order to boost both human and social capital; experiences from the emerging markets see human capital has widely

adjudged as the engine of growth while social capital is the lubricants. Capital spending monitoring and outcome qualification are urgently required as these areas have been grossly neglected, which has resulted in fund misappropriation, white elephant and abandoned projects.

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Impact of Domestic Public Debt and Institutional Quality on Financial Development in Nigeria

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Abstract

This paper analyses the impact of domestic public debt and institutional quality on financial development in Nigeria, using time series data for the period of thirty-seven (37) years (1980-2017). In analyzing the data, the paper uses Autoregressive Distributed Lag (ARDL) model and the result indicates that domestic public debt composition has significant negative impact on financial development in Nigeria. However, the interaction between domestic public debt composition and institutional quality has significant positive impact on financial development. The study concludes that domestic public debt in the presence of strong institutional quality promotes financial development. The main recommendation of the study is that government should strengthen financial and political institutions. This is expected to reduce risk, increase stability and efficiency of the financial system. Policy makers should also control spending, manage debt and maximize domestic revenue collection.

Key words: ARDL, Financial Development, Co-integration, Domestic Public, Debt Composition, Institutional Quality.

JEL Classification: P34, H63

1. Introduction

Resulting from the 2008 Global Financial Crisis, many nations embarked on fiscal stimulus plans in response to the fiscal imbalance from the great recession. The fiscal consolidation measures employed by some countries drew the interest of researchers and policy makers on the role of fiscal policy on economic stability (Reinhart and Rogoff, 2011). This phenomenon is severe in developing countries that are prone to financial instability (Smaoui, Grandes & Akindele, 2017). King'wara (2014); and Maana, Owino, and Mutai, (2008) have empirically shown how expansionary fiscal policies mostly financed from domestic public debt crowd out private investment, hence financial development. Hauner (2008) argued that the effect of domestic public debt on financial development may not necessarily be on reducing the loanable funds but reducing the efficiency of banks to

advance credit to private sector. Nigeria provides a useful setting for analysis of the impact of domestic debt on financial development, because the country is characterized by underdeveloped domestic debt market and financial instability (Smaoui *et al.*, 2017). This is further aggravated by recurring economic recession.

However, not very much attention has been given to understanding of the role of domestic public debt in financial development within the purview of institutional quality. Some few works which dwelled on this issue included the empirical work of Hauner (2008; 2009) and the theoretical exploration of Ismihan and Ozkan (2012). However, Ismihan and Ozkan (2012) have only offered alternative explanation on the interaction between fiscal policy and financial development. Recently, Ayadi, Arbak, Naceur and Groen, (2015) wrote on the determinants of financial development in Mediterranean countries using panel data with fixed random effect method. According to Chinn and Ito (2006), the degradation of the institutional environment, such as frauds, market manipulations, false trading, market rigging and false representations, have been common challenges to financial development. The ineffectiveness of institutional environment to strengthen the market integrity through a viable rule of law to promote investors' confidence has been argued to be associated to poor performance of financial market and financial institutions. Institutional quality is a crucial factor that shapes the relationship among economic agents. These institutions comprise the legal, political and supervisory bodies that provide stability and order in business activities. The institutional quality is described as factor stemming from government policies and programmes which influence economic outcomes or the ability of economic entities to achieve their business goals and objectives (Kutivadze, 2011).

Therefore, this study examines the impact of domestic public debt and institutional quality on financial development in Nigeria. In other words, the paper aims at examining the joint effects of domestic public debt and institutional quality on financial development. In achieving this objective the paper is structured into five sections: Section one introduces the paper, section two reviews related literature, section three deals with methodology, section four presents results and discussion while section five is the conclusion and recommendations.

2. Literature Review

Earlier literature on financial development (Mckinnon, 1973; Show, 1973) emphasize on evils of government intervention such as interest rate ceilings, direct credit programmes and higher reserve requirement as the main factors that hinder financial development. However, it has been observed that not very much attention has been paid to the role of domestic debt securities on financial development of, especially developing countries.

Mehrotra *et al.*, (2012) argued that developed domestic debt security market allows the private sector to issue its own debt in the market, making the financial system and the broader economy more resilient to shocks. In the same vein, Kumhof and Tanner (2005) stressed the significance of domestic debt market. It provides wide range of instruments and serves as a bench mark for the price of security instruments in the market. Similarly, Abbas and Christensen (2010) stated that issuing domestic debt instruments to finance fiscal deficit reduce risk and is considered healthier for financial development. This is because it mops up

monetary liquidity thereby addressing rise in inflation which according to Boyd *et al.*, (2001) has negative impact on financial development.

Nevertheless, the literature stressed that domestic debt instruments play significant role only in the presence of sound institutional and macroeconomic framework (Abbas and Christensen, 2010). Government debt securities are vital instruments for collateralized lending in the interbank market, and also help the management of banks to effectively manage their liquidity thereby minimizing the need for frequent central bank intervention (Detragiache, 2005). Ndikumana, (2001) added that central bank's operations in a well-developed domestic debt market rely less on direct controls such as higher reserve ratio and interest rates control which promote financial development.

On the other hand, some literature argue in favour of the negative impact of domestic debt security markets on financial development. For example, Hauner (2008) argued that banks investing in public debt securities are more profitable but less efficient and tend to prefer short term portfolio allocation and thus build additional vulnerabilities where domestic banks and institutional investors may be induced by moral suasion to absorb high government debt. In another study by Hauner (2009) which he termed "lazy bank approach", it was reported that domestic debt increases share of bank credit absorbed by the public sector which in turn slows financial development. When government issues more securities, banks tend to shift their portfolio to a less risky investment at the expense of advancing credit to private sector which is seen as one of the main indices of financial development (Janda & Kravtson, 2017; Mbulawa, 2015; Ismihan and Ozkan, 2012).

However, as stated earlier, the structure of government debt markets in developing countries has changed dramatically. The investor base has broadened with increased participation of institutional investors which has implication on financial development (see Hauner, 2009 and Bua *et al.*, 2014). Another issue is that previous studies did not capture the influence of structural breaks in the data gathering process, which is obvious using developing countries' data typical of Nigeria. Existence of structural break might affect the reliability of the previous findings. Zivot and Andrews (1992) highlighted the importance of accounting for structural breaks in the estimation process. This motivates the research to examine the impact of domestic public debt composition on financial development by taking into account the presence of institutional quality.

3. Methodology

This study uses secondary data for a period of 37 years and was collected from the World Bank and the Central Bank of Nigeria. The following macroeconomic variables were employed; credit to private sector as a ratio of GDP is proxied for financial development following the works of Mun & Ismail (2015) and Ismihan & Ozkan (2012), government debt securities holding of banking system and non-bank as ratio GDP is proxied for domestic public debt composition, and gross domestic product. GDP is obtained from World Development Indicators (WDI), domestic public debt composition is obtained from CBN statistical bulletin, and Regulatory quality is used as a proxy for institutional quality and is gotten from worldwide governance indicator. In analyzing the data the ARDL bound testing approach to co-integration was employed.

The functional specification used in the paper was adopted from the work of Law and Habibullah (2009) and is specified as follows:

$$FD = f(RGDPC, R) \dots\dots\dots 1$$

Where,

- FD*= financial development,
- RGDPC*= real GDP *per capita*,
- R* = real interest rate

However, to achieve the objective of the study, equation (3.1) is extended to include domestic public debt and institutional quality based on the theory of McKinnon and Shaw (1973) as follows:

The mathematical model is given as

$$FD = f(DPD, INQ, (DPD * INQ), GDP) \dots\dots\dots 2$$

Statistically, the mathematical model is re-written as presented in equation (3)

$$InFD_t = \beta_0 + \beta_1 InDPDt + \beta_2 InINQt + \beta_3 In(DPD * INQ)_t + \beta_4 InRGDPt + U_t \dots\dots\dots 3$$

Where

InFDI = Financial development using credit to private sector as a percentage of GDP following the works of Ismihan and Ozkan (2012) and Mun and Ismail (2015).

- β_0 = constant parameter, β_i = coefficient of the explanatory variables $i = 1, 2, \dots, 4$.
- U_t = stochastic disturbance term. *InDPDt* = domestic public debt, *InINQt* = institutional quality, *In(DPD * INQ)t* = Interaction term of domestic public debt and institutional quality, *InRGDPt* = gross domestic product and t = time subscript.

3.1 ARDL Bound Approach

Following the works of Baharumshah, Mohd and Masih (2009) and Umar and Musa (2015), the Auto regressive Distributed Lag (ARDL) model used in this study is expressed as follows:

$$\Delta LFD_t = \beta_0 + \beta_1 LFD_{t-1} + \beta_2 LDPD_{t-1} + \beta_3 LINQ_{t-1} + \beta_4 L(DPD * INQ)_{t-1} + \beta_5 LGDP_{t-1} + \sum \lambda_1 \Delta LFD_{t-1} + \sum \lambda_2 \Delta LDPD_{t-1} + \sum \lambda_3 \Delta LINQ_{t-1} + \sum \lambda_4 \Delta L(DPD * INQ)_{t-1} + \sum \lambda_5 \Delta LGDP_{t-1} + U_t \dots\dots\dots 4$$

Where:

- B_0 is the drift component,
- Δ is the First difference operator.
- LFD is the log of financial development,
- DPD domestic public debt,
- INQ is the institutional quality and
- GDP is the gross domestic product.
- β_i, λ_i are Vectors of the parameter of the variables.
- U_t is white noise with zero mean.

The null hypothesis in the equation is $H_0: \alpha_1 = \alpha_2 = \alpha_3 = 0$. This denotes the absence of long-run relationship

After establishing an evidence of cointegration among the variables in the model, the long run parameters are estimated based on the specification in Equation 5 below:

$$LFD_t = \beta_0 + \beta_1 LFD_{t-1} + \beta_2 LDPD_{t-1} + \beta_3 LINQ_{t-1} + \beta_4 L(DPD * INQ)_{t-1} + \beta_5 LGDP_{t-1} + U_t \dots \dots \dots 5$$

In order to estimate the short-run relationship between the variables and the speed of adjustment of the model to equilibrium, the corresponding error correction equation is estimated as:

$$\Delta LFD_t = \lambda_0 + \lambda_1 \Delta LFD_{t-1} + \lambda_2 \Delta LDPD_{t-1} + \lambda_3 \Delta LINQ_{t-1} + \lambda_4 \Delta L(DPD * INQ)_{t-1} + \lambda_5 \Delta LGDP_{t-1} + \lambda_6 ECM_{t-1} + U_t \dots \dots \dots 6$$

Where, ECM is the error correction term of one period lag while the coefficient λ_6 measures the speed of adjustment of the model convergence to equilibrium.

4. Results and discussion

After analyzing the data collected using the models specified above, we obtained some results which are presented and discussed in this section. The section therefore, comprises of three parts including this introduction. In part two we present result of Unit root analysis and in part three results for bound test for cointegration are presented.

4.1 Unit Root Analysis

The stationarity of the series employed are checked first using ADF test proposed by Dickey & Fuller (1979). The result is shown in Table 4.1

Table 4.1: *Augmented Dickey Fuller Unit Root Test*

Series	Intercept without trend		Intercept with trend	
	Level	1 st Difference	Level	1 st Difference
LFD	-0.5805	-2.9275**	-3.0794	-3.5960**
LDPD	-2.5366	-2.7999**	-2.6891	-3.1494*
LINQ	-3.5594***	-3.6964**	-4.0756***	-4.0560***
L(DPD*INQ)	-2.5611	-2.787*	-3.0789	-3.3344*
LGDP	-2.3683	-4.1428***	-1.2780	-3.7648**

*Note: ***, ** and * represent significance level at 1%, 5% and 10% respectively. The figures are the t-statistics for testing the null hypothesis that the series has unit root. The lag length is determined and fixed as 4 based on Schwert (1987). The critical values for intercept without trend are -3.479, -2.883 and -2.578 whereas, for intercept with trend the values are -4.028, -3.443 and -3.146 for 1%, 5% and 10% respectively; Source: Researcher's Computation*

Tables 1 presents the estimations of the ADF unit root test on the macroeconomic variables that determine financial development. The ADF results show that all the series are not stationary at level except for LINQ under both intercept without trend and intercept with trend, which is found to be significant at 5% level under the two models. Therefore, none of the series is stationary beyond I(1).

However, it is argued that existence of structural break in the data generating process will lead to size distortion and spurious conclusion in the ADF model (Lee & Strazicich, 2003 and Perron, 1989). Thus, in addition to the traditional ADF test, this study employs Lee and Strazicich Lagrange multiplier with one structural break to further check the unit root properties of the series. The results are presented in Table 4.2

Table 4.2: Lee and Strazicich One-Break LM Unit Root Test

Series	MODEL A					MODEL C				
	K	\hat{T}_B	t_{rj}	Test Stat.	Critical value break points Λ	K	\hat{T}_B	t_{rj}	Test Stat.	Critical value break points Λ
Dlfd	2	1983	1.329	-3.311 ^C	0.03	2	2007	-1.224	-4.216 ^B	0.07
Dldpd	2	1990	3.519***	-4.133 ^A	0.10	2	2007	1.945*	-4.329 ^B	0.06
dLINQ	2	2005	2.551**	-4.123 ^A	0.07	2	1998	3.960***	-4.788 ^A	0.10
dL(DPD*INQ)	2	2011	1.219	-3.214 ^C	0.09	2	2009	-1.532	-4.221 ^B	0.05
Dlqdp	2	1989	2.282**	-2.748	0.07	2	2005	-	-3.874 ^C	0.10
								3.409***		
Critical Values	1%	5%	10%							
MODEL A	-	-3.487	-3.185							
	4.084									
MODEL C	-	-4.128	-3.839							
	4.699									

Note: k^* is the optimal number of lagged first-difference terms included in the unit root test to correct for serial correlation. \hat{T}_B denotes the estimated break points. t_{rj} is the t value of $DTjt$, for $j=1$. A, B and C indicate significance of the LM test statistics at 99%, 95% and 90% significance level, respectively. While ***, ** and * indicates the two-tailed significance level of the break date at 99%, 95% and 90% respectively; Source: Researcher's Computation

The result also indicates a mixture in the order of integration in the LS test in Table 4.2 as found in the ADF test. In other words, all the series are found to be stationary only after taking their first difference under both crash and trend models with the exception of LINQ. But LFD is characterised with breaks in both level and trend. However, the test established that the break dates are not statistically significant.

4.2 Bound test for Cointegration

The bound test for cointegration is estimated to determine whether there is cointegration among the variables captured in the ARDL model. This has been achieved using the bound testing approach and the results are presented in Table 4.3.

Table 4.3: ARDL Bound Cointegration Test

Model	F-Stat.	Sig. Level.	Critical Value	
			I(0)	I(1)
LFD = $F(LDPD, LINQ, L(DPD*INQ), LGDP)$	4.120**	10%	2.26	3.35
LDPD = $F(LFD, LINQ, L(DPD*INQ), LGDP)$	2.267	5%	2.62	3.79
LINQ = $F(LFD, LDPD, L(DPD*INQ), LGDP)$	3.127	1%	3.41	4.68
L(DPD*INQ) = $F(LFD, LDPD, LINQ, LGDP)$	3.035			
LGDP = $F(LFD, LDPD, L(DPD*INQ), LGDP)$	4.021**			

Note: ***, ** and * represent significance level at 1%, 5% and 10% respectively. The critical values are based on Narayan (2005), case III for $T = 35$ due to small sample size of the study. Source: Researcher's Computation

The bound test results in Table 4.3 revealed the existence of two cointegration vectors among the five vectors. When financial development is the dependent variable, the null hypothesis of no cointegration is rejected at 5% level of significance. This is because the F-statistic, 4.120 is greater than the upper critical value of 3.79 indicating that there is

cointegration. Such cointegration also exists at 5% significant level in the case of LGDP been taken as the dependent variable. This is because the F-statistics, 4.021 is greater than the upper critical value of 3.79. However, cointegration does not exist in the equations with LDPD, LINQ, and L(DPD*INQ) as the dependent variables.

Table 4.4: Long Run and Short Run Coefficients

Variables	Long Run Coefficients	Short Run Coefficients	
LDPD	-0.372** (-2.740)	D(LDDB)	-0.262*** (-3.442)
LINQ	0.017* (-0.985)	D(LINT)	0.034* (-0.966)
L(DPD*INQ)	0.169* (2.026)	L(DPD*INQ)	0.057*** (3.159)
LRGDP	0.630** (2.542)	D(LRGDP)	0.214** (2.244)
CONSTANT	-3.217*** (-2.077)	CointEq(-1)	-0.415*** (-2.236)

Note: *** (**) * denote statistical significance at the 1%, 5%, and 10% levels, respectively. The figures in parentheses are the T-statistics; Source: Researcher's Computation

LDPD coefficient from Table 4.4 is -0.372 indicating a negative effect of domestic public debt composition on financial development in the long run. The coefficient is significant at 5% level of significance. Therefore, a percentage point increase in domestic public debt composition decreases financial development by 0.372 percent. The relationship is also negative and significant in the short run. This is in line with the results of Mun and Ismail (2015) and Ismihan and Ozkan (2012). This also means that there is the possibility of financial crowding out where government borrowing through excessive bond subscription of the banking system replaces private borrowing in the banking sector portfolios. This is basically true in developing countries like Nigeria where the government and the private sector borrow from the same pool (Bua *et al.*, 2014).

The coefficient of institutional quality, 0.017 also indicates a significant positive relationship with financial development at 10 percent level of significance in the long run. This result is in conformity with the results of Kutivadze (2011) as well as Chinn and Ito (2006). Strong institutions and the legal and regulatory environment are one of the factors that promote the development of a healthy financial system. Abbas and Christensen (2010) found that financial development is stronger in economies where institutions better protect and enforce property rights and reinforce the rights of creditors. Furthermore, Ayadi, Arbak, Naceur and De Groen (2015) and Law & Habibullah (2009) also found that the existence and quality of institutional checks and balances significantly influences crisis mitigation and success of financial reforms.

The interaction term L(DPD*INQ) is positive and significant in both the short run and the long run. The coefficient of 0.169 in the long run, shows a significant positive impact of domestic public debt composition in the presence of institutional quality on financial development at 10 percent level of significance. This means that with strong institutions, a

percentage point increase in domestic public debt will increase financial development by 0.169 percent. This result is in line with the assertion made in Law and Habibullah (2009). Therefore, for domestic public debt to have the significant effect on financial development stated in Kumhof and Tanner (2005), quality of institutions and regulatory bodies needs to be strengthened. This is expected to reduce risk, increase stability and efficiency of financial system. It will also help to control spending, and manage debt.

The coefficient of LRGDP also shows a statistically significant effect of real gross domestic product on financial development at 5% level in both the short run and the long run. The long run coefficient of 0.630 indicates that a percentage point change in LRGDP decreases the level of financial development by 0.630 percent. The result is in agreement with the framework of (Shaw, 1973) which states that with economic growth, more resources are mobilized for savings and investment. Economic growth also increases the volume of financial transactions which in turn boots financial deepening.

The error correction coefficient (ecm) which is approximately -0.415 not only has the expected sign but also statistically significant at 1% level of significance. The value of the error correction term implies a fairly slow speed of adjustment to equilibrium after a shock.

Table 4.5: *Diagnostic Test*

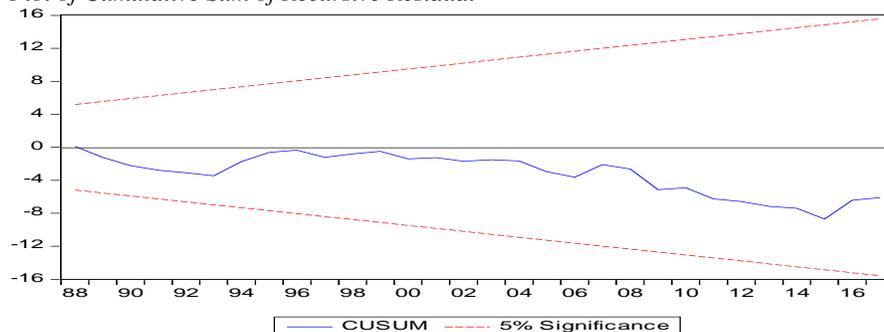
Test Statistics	Chi-Square/LM Test	Probability Value
Serial Correlation	1.001	0.325
Functional form	1.299	0.263
Normality	4.744	0.742
Heteroscedasticity	0.222	0.640

Note: Serial correlation is examine using Lagrange Multiplier test of residual, functional form is based on Ramsey's RESET test, normality base on skewness and kurtosis while Heteroscedasticity is based on squared residuals on squared fitted values; Source: Researcher's Computation

The test statistics on each of the null hypotheses could not be rejected at any conventional level of significance. Therefore, we conclude that there is no serial correlation, model misspecification, non-normality and heteroscedasticity. Hence, the results of the diagnostic test indicate that the coefficients of the estimated model are not associated with the problems of serial correlation, model misspecification, non-normality of residuals and heteroscedasticity.

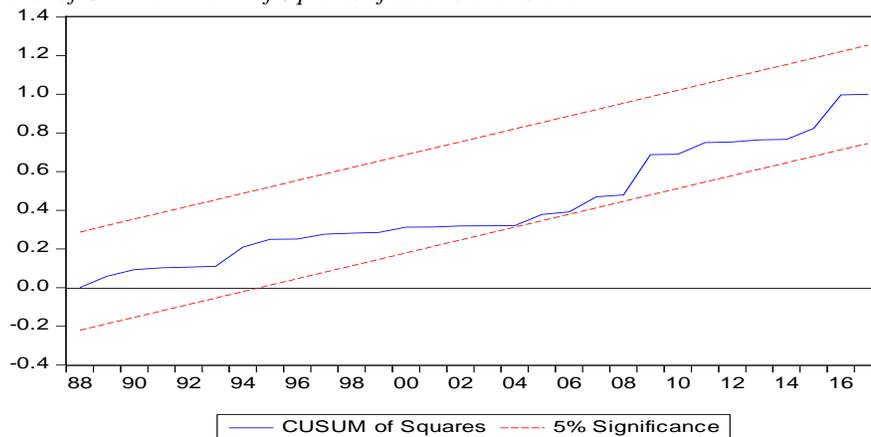
The stability of the estimated coefficients is also examined using cumulative sum of recursive residuals and cumulative sum of squares of recursive residual. This is shown in figures 1 and 2 below.

Figure 1
Plot of Cumulative Sum of Recursive Residual



We checked the stability of the long-run relationship between financial development and its determinants. We used the CUSUM tests to test for constancy of long-run parameters. The tests are applied to the residuals of the model. The plot of the CUSUM statistics stays within the 5% significance level, therefore, the estimates are stable.

Figure 2
Plot of Cumulative sum of Squares of Recursive Residual



Next, we checked the stability of the long-run relationship between financial development and its determinants. We used the CUSUM-squared tests to test for constancy of long-run parameters. The tests are applied to the residuals of the model. The plot of the CUSUM-squared statistics stays within the 5% significance level, and then the estimates are stable. The coefficients are found to be stable over the period under study. Figures 1 and 2 show that the parameters are within the upper and lower critical bounds at five percent level of significance.

5. Conclusion and Recommendations

Based on the findings of this study it could be concluded that domestic public debt composition in the presence of institutional quality has a significant positive impact on financial development in Nigeria. This means that with strong institutional quality any increase in domestic public debt composition can promote financial development.

Therefore, we recommend that to maintain a high level of financial development in the case of rising domestic debt composition, corrupt practices within financial institutions and financial markets should be checked so as to boost investors' confidence and financial market liquidity. This means that the fight against corruption at all levels should be intensified by strengthening the anti-corruption agencies like the EFCC and the ICPC. Secondly, the regulators of financial market and financial institutions (Security and Exchange Commission, Nigerian Stock Exchange and Central Bank of Nigeria) should reinforce their standard for market regulation and supervision. And finally, government must ensure that any money raised from public debt offer should also be used prudently and judiciously.

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