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Table of Content

FOREIGN RESOURCES INFLOW AND ECONOMIC GROWTH IN NIGERIA

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Abstract

The study assessed the impact of foreign resources on economic growth in Nigeria from 1986 to 2015. Secondary data were obtained from various issues of CBN statistical bulletin. Economic Growth (the dependent variable) was considered interms of real gross domestic product (RGDP); while foreign resources (independent variable) was considered in the form of foreign direct investment (FDI), foreign portfolio investment (FPI), and official direct assistance (ODA). These served as the major regressor with exchange rate (EXCR) as check variable. The techniques of analysis used were ADF test of stationarity, co-integration test for long-run relationship, and Error Correct Mechanism (ECM) analyse of relationship between the variables. The results show that the explanatory variables explained 93.7% of the variations in economic growth in Nigeria. F-statistic of 66.628 (F-table = 2.84) showed statistical significance the model. The values of the coefficient of past (lag 1 and 2) of FDI and current value of FPI had significantly positively signed, while the first lag (lag 1) of ODA and current value of EXCR were significantly negatively related with economic growth. From these findings, foreign resource inflows is said to, on the whole, have significant impact on RGDP. In conclusion, the study submits that the flow of foreign resourcesis very important toeconomic growth (in terms of the growth in real gross domestic product) in Nigeria within the period of study. This means that, more efforts should be done to attract and ensure effective use of the resources.

Keywords: Foreign Capital, Real Gross Domestic Product, Foreign Direct Investment, Official Direct Assistance, Exchange Rate

1.0   INTRODUCTION

The cardinal economic objective of developing countries, including Nigeria, is to achieve high economic growth which will enhance rapid economic development and poverty reduction. This is so because, economic development depends to a very large extent on the level of investment and growth, which is also dependent on capital accumulation. The accumulation of capital is in turn, therefore, the key to economic growth. Thus, capital is an essential component which breaks the vicious circle of poverty if adequately mobilized and invested (Onyeso, 2010).As such, the non-availability of the capital resources that would drive the process of economic growth, which has been at the front burner of economic policy of developing countries, often hinders the achievement of this required economic growth. This then makes the sourcing for and accumulation of capital very important, especially that which comes in from without the country. The need for foreign capital flow arise when the desired investment exceeds the actual savings and also due to investments with long gestation periods that generate non-monetary returns, growing government expenditure that are not tax-financed; and when actual saving is lower than potential saving due to repressed financial markets and even capital flight (Essien & Onwioduokit, 1999).

In order then to increase the stock of capital necessary for economic growth, a few options are open; it can either be borrowed from outside, attract foreign investments or borrowed from the domestic money and capital markets. Each of these alternatives is constrained in terms of its feasibility and effectiveness in the Nigerian context. The often (Oyejide,2005) narrowness of the Nigerian financial market poses constraint on its reliance for huge investment capital for the productive sectors of the economy. Therefore, this has increased the extent to which the country relies on externally sourced funds through foreign capital inflow, external borrowing. There are, however, certain conditions that must be met. Some of such are the International Monetary Fund (IMF) set of conditionalities, which are often difficult to meet. However, foreign capital inflows appear to be a leeway to pry-loose these challenges given the high benefits it confers to the host economy even though it has its own constraints.

However, in an effort to mobilize resources for growth and sustained economic development, a country must rely on transfer of foreign resources until it achieves the capital self-sustained growth (Aborh, 2015). According to Gbosi (2003), foreign capital flows into a country in the form of foreign aid, private foreign investment and private bank lending. These are the principal ways by which resources come from rich nations to poor ones. There is no doubt that capital inflow from these sources further the transmission of technology, ideas, knowledge and others into less developed economy.

Capital inflows can also benefit recipient countries through a variety of channels, such as heightened domestic investment, financial sector development, improved liquidity, and international integration (Kim & Yang, 2008). And where there is low rate of savings, as witnessed in Nigeria, it is difficult to finance investment entirely through domestic savings. By augmenting available local capital, foreign capital inflow can assist in creating direct and indirect employment in an economy.

The disadvantages also abound: large capital flows could spur economic growth or have destabilizing effect in the economy, if not well managed. The destabilizing effect of foreign capital inflows had aroused concern over their potential effects on macroeconomic stability, the competitiveness of the export sector and external viability. The most risk is that they fuel inflation and drive the real exchange rate to unstable high level (Obiechinna & Ukeje, 2013).

Nevertheless, the benefits usually hold sway. Therefore, arising from the benefits above, the Nigerian government, like its counterparts, has realized the need to focus on providing an enabling environment that would make the private sector to strive in contributing meaningfully to the country's quest for development. The government has committed itself to improving the country's economic performance through expansion of the private sector. The commitment became more pronounced or visible when Nigeria transited to democratic dispensation in 1999. Past and present leaders of Nigeria, since 1999, have visited foreign countries to solicit and attract foreign investors to Nigeria. In addition, major policy steps are being taken to reduce regulatory constraints so as to attract foreign investors (Wafure & Nurudeem, 2010).

However, despite all the concerted effort made by our past and present government concerning foreign resources, Nigerian's experience with capital inflow is still in doubts.

Table 1: The rate of growth of the Real GDP vs that of Foreign Resources inflow

Year	RGDP (N,m)	FDI (N,m)	FPI (N,m)	ODA (N,m)
1987	0.170232	233.3515	2771.438	870.4065
1991	-0.55202	47.5907	36.69577	-1.17672
1995	1.872355	241.6254	2742.752	-3.31706
1999	0.521832	14.91474	-259.325	-26.9244
2000	5.518497	24.95859	4928.955	17.1449
2005	7.008456	163.5489	392.906	962.9105
2009	8.353335	31.11254	-145.139	31.41853
2010	9.539775	-28.8963	684.6023	23.38126
2011	5.307929	50.18899	-242.361	-13.8359
2013	5.487796	-21.4105	-179.27	-17.7063
2015	2.786392	-18.4408	-40.1565	1.237368

Source: Computed from CBN statistics, (various years)

It is still questionable to tell what impact foreign capital inflows have on economic growth in Nigeria. For instance, as can be seen from Table 1, the growth rate low as compared to the growth rate of the foreign resources inflow over the years. Also, while economic growth has been relatively positive over time, the rate of growth of the foreign resources inflow has been negative for some years. As such, in specific terms, it is, therefore, arguable if foreign resource inflow [in the form of foreign direct investment (FDI), foreign portfolio investment (FPI), and official direct assistance (ODA)] has any impact on economic growth in Nigeria. It is in view of the foregoing that this study aimed at investigating the impact of foreign resources inflow on economic growth in Nigeria between 1986 and 2015.

This paper is divided into five sections; section one is the introductory aspect, section two deals with theoretical and empirical literature while section three dwells on methodology. Section four is results and discussion. Section five is the conclusion and recommendation.

2.0   LITERATURE REVIEW

2.1   Theoretical Framework

The flow of capital between the developed and the developing countries has its origin in the colonial period. Although the issue of development was not important either to colonies or to the relationship between richer and poorer countries, aid has been provided to accelerate developing economics, hence the role of outside capital is not directly to raise the standards of living but to make a transition in the economy and bring about sustainable growth. This has changed over time and there are a lot of theories and other scholarly works now that seek to not only explain, but encourage the flow of foreign capital from the advanced nations to the developing ones.

The early neoclassical theories explains international capital flows with differentiated rates of returns across countries that lead to capital arbitrage, with capital seeking the highest return. Cockcroft & Riddell (1991) argue that the future investment flows are directly related to the package of incentives, which influence expected rate of returns; the security of the investment; the scope and speed with which companies are able to disinvest. The tax regime; investment code guidelines; overall macroeconomic policies are all elements of attracting foreign capital. Despite these changes, there is still need for action for improvement of factors that inhibited investment. These factors include lack of formal legislation, lack of legal infrastructure such as patents, price control, labour legislation, taxation policy and foreign exchange control. It suggests that addressing these problems would certainly help improve the foreign capital inflow.

2.2   Review of Empirical Literature

There are many scholarly discusses about foreign resource inflows and economic growth in Nigeria.Such studies include those of Kumar & Pradhan (2002) who analyzed the relationship between FDI, growth and domestic investment for a sample of 107 developing countries for the 1980-1999 period. Their model uses flow of output as the dependent variable and domestic and foreign owned capital stock, labor, human skills capital stock and total factor productivity as their independent variables. Their results of a panel analysisshow that suggest a positive effect of FDI on growth and held that, although FDI appears to crowd-out domestic investments in

net terms, in general, some countries have had favourable effect of FDI on domestic investments in net terms suggesting a role for host country policies.

Mohey-ud-din (2006) studied the impact of foreign capital flows on economic growth in Pakistan from 1975 to 2004 using GDP as the dependent variable and net inflow of FDI and ODA (Official Development Assistance and Official Aid) as the independent variable. The study showed a high positive impact of foreign capital inflows on the GDP growth in Pakistan during the period of 1975-2004.

In the same light, Kyaw & Macdonald (2010) also examined the impact of foreign direct investment and portfolio investment flow on economic growth in a sample of 126 developing countries, over the period 1985-2002. It was found that effects of foreign direct investment and portfolio investment are conditional to host country's absorptive capacity.

Amadasun & Okodua (2011) examined the inflow of foreign Direct Investment and other related investments into sub-saharan Africa (SSA); other factors that support or hinder the inflow of FDI and the instruments and strategies to adopt to make it fundamental for achieving SSA drive to become a development capable region.

Reisen & Soto (2011) examined the growth effect of foreign direct investment, portfolio equity flows and banks' lending, which include short-term and long-term lending for 44 emerging economies, covering from 1986 to 1997. They found that foreign direct investment and portfolio investment or equity flows exert a significant positive effect on growth while bank lending has a significant negative impact on growth.

Other empirical studies done by Obwona & Egesa (2007), Osabuohien (2007), Adofu (2010), Shen, Lee & Lee (2011), Ekwe & Inyiama (2014), Sethi (2013), Umoh & Jacob (2013) also found positive impact of foreign direct investment has a significant on growth.

3.0   METHOD OF STUDY

The study was designed to be quasi-experimental. The cointegration and error correction technique, was employed as the main analytical tools. The unit root test was also applied to ascertain the stationarity properties of the series so as to correct every instability that may exist in time series data. The long run relationship that exists among the variables was tested with the Johansen co-integration, vector error correction model and pair-wise granger causality test.

The functional relationship between our variables is as follows:

$$RGDPt = f(FDI,,FPI,ODA,EXR,) \tag{1}$$

The model, in its explicit (linear) form, is specified as:

$$RGDPt = \alpha_0 + \alpha_1 FDI + \alpha_2 FPI + \alpha_3 ODA + \alpha_4 EX + U \tag{2}$$

From our model, we expect that; $a_1 > 0, a_2 > 0, a_3 > 0, a_4 < 0$,

3.1   Testing Techniques and Procedures

Augmented Dickey Fuller (ADF) Test for Unit Root [I(0) and I(1)]

The series of the study were tested for a unit root using the standard augmented Dickey-Fuller (ADF) test which holds that: for a time series   the ADF test requires the following regression carried out under three conditions:

i.   A random walk process which is defined as; $(X_t \text{ or } Y_t)$,

ii.   A random walk process with drift which is defined as;

$$\Delta X_t = \delta X_{t-1} + \sum_{i-1}^{m} \alpha \Delta X_{t-i} + \varepsilon_t \tag{3}$$

where,

$$\Delta X_t = \beta_1 + \delta X_{t-1} + \sum_{i-1}^{m} \alpha \Delta X_{t-i} + \varepsilon_t \tag{4}$$

iii.   A random walk process with drift around a stochastic trend which is defined as;

$$\Delta X_t = \beta_1 + \beta_2^t \delta X_{t-1} + \sum_{i-1}^{m} \alpha \Delta X_{t-i} + \varepsilon_t \qquad (5)$$

where,

δ = the difference operator; ε_t = the random error term.

The ADF test considers a null hypothesis of an I(1) process against the alternative of an I(0) process.

Time Series Cointegration

The multivariate cointegration test was used to assess the long run equilibrium linkages among the variables in the system. Cointegrated variables, if disturbed, will not drift apart from each other and hence, possess a long run equilibrium relationship. Testing for the existence of cointegration among economic variables with the Johansen (1991, 1988) maximum likelihood test requires the following procedure:

Consider a Vector Auto Regressive (VAR) model of order k:

$$\Delta Y_t = \mu + \varphi_1 Y_{t-1} + \varphi_2 Y_{t-2} + \cdots + \varphi_{k-1} Y_{t-k+1} + \Pi Y_{t-k} + \xi_t \qquad (6)$$

Where Yt is an 5 X 1 vector of the first order integrated [i.e., I(1)] variables; φ_i are 5 X 5 coefficient matrices; and ξ_t is a vector of normally and independently distributed error terms. The existence of cointegrating vectors (r) Π is rank-deficient. If Π s of rank r (0 < r < 5), then it can be decomposed as: $\Pi = \alpha\beta'$ where α (5Xr) and β (5Xr); and equation (6) can be rewritten as:

$$\Delta Y_t = \mu + \varphi_1 Y_{t-1} + \varphi_2 Y_{t-2} + \cdots + \varphi_{k-1} Y_{t-k+1} + \alpha\beta' Y_{t-k} + \xi_t \qquad (7)$$

The rows of β are considered as the distinct cointegrating vectors whereby $\beta' Y_{t-1}$

from linear stationary processes, while those of α as error correction coefficients (loading factors) that indicates the speed of adjustment towards the long run equilibrium. We can also represent the VAR as in the following form:

$$\Delta Y_t = \mu + \Pi Y_{t-1} + \sum_{i=1}^{k-1} A_i \Delta Y_{t-i} + \xi_t \quad (8)$$

The *Trace* and the *Maximal Eigenvalue* likelihood ratio test statistics are then constructed from the residual vectors as:

$$\lambda_{Tra} = -T \sum_{i=r+1}^{n} Log(1 - \hat{\lambda}) \quad (9)$$

Where $\hat{\lambda}_{r+1}, ... \hat{\lambda}_n$ are (n-r) smallest estimated eigen values with the null hypothesis that there are at most r unique cointegration vectors.

and

$$\lambda_{Max} = -TLog(1 - \hat{\lambda}_{r+1}) \quad (10)$$

The null hypothesis for this test is that there are r cointegrating vectors in Yt. For both tests, the alternative hypothesis is that there are g > r cointegration vectors in Yt.

Vector Error Correction Model (VECM)

A basic single equation error correction model (ECM) between a dependent variable Y and an independent variable X is of the form:

$$\Delta Y_t = \alpha + \beta_0 \Delta X_t - \beta_1 (Y_{t-1} - \beta_2 X_{t-1}) + \varepsilon_t \quad (11)$$

$$\Delta Y_t = \alpha + \beta_1 \Delta X_t - \beta_2 EC_{t-1} + \varepsilon_t \quad (12)$$

However, the Granger representation theorem (Granger, 1988) holds that if two variables (say $Y_1 t$ and $Y_2 t$) are cointegrated and each is individually I(1), then either $Y_1 t$ Granger causes $Y_2 t$ or $Y_2 t$ Granger causes $Y_1 t$. Causality of cointegrated variables, for this study (with more than two variables), is thus captured by Vector Error Correction Model (VECM) where Y_1 is the dependent variable (RGDP) and Y_2, Y_3, Y_4, and Y_5 are the independent variables respectively. The model is therefore expressed as follows:

$$\Delta Y_{1t} = \varphi_1 + \sum_{k=1}^{n-1} \alpha_{11,k}\Delta Y_{1,t-1} + \sum_{k=1}^{n-1} \alpha_{12,k}\Delta Y_{2,t-1} + \sum_{k=1}^{n-1} \alpha_{13,k}\Delta Y_{3,t-1} + \sum_{k=1}^{n-1} \alpha_{14,k}\Delta Y_{4,t-1}$$

$$+ \sum_{k=1}^{n-1} \alpha_{15,k}\Delta Y_{5,t-1} + \sum_{h=1}^{r} \alpha_{11,h}EC_{h,t-1} + \varepsilon_t \qquad (13)$$

$$\Delta Y_{2t} = \varphi_2 + \sum_{k=1}^{n-1} \alpha_{21,k}\Delta Y_{1,t-1} + \sum_{k=1}^{n-1} \alpha_{22,k}\Delta Y_{1,t-1} + \sum_{k=1}^{n-1} \alpha_{23,k}\Delta Y_{3,t-1} + \sum_{k=1}^{n-1} \alpha_{24,k}\Delta Y_{4,t-1}$$

$$+ \sum_{k=1}^{n-1} \alpha_{25,k}\Delta Y_{5,t-1} + \sum_{h=1}^{r} \alpha_{21,h}EC_{h,t-1} + \varepsilon_t \qquad (14)$$

$$\Delta Y_{3t} = \varphi_3 + \sum_{k=1}^{n-1} \alpha_{31,k}\Delta Y_{1,t-1} + \sum_{k=1}^{n-1} \alpha_{32,k}\Delta Y_{2,t-1} + \sum_{k=1}^{n-1} \alpha_{33,k}\Delta Y_{3,t-1} + \sum_{k=1}^{n-1} \alpha_{34,k}\Delta Y_{4,t-1}$$

$$+ \sum_{k=1}^{n-1} \alpha_{35,k}\Delta Y_{5,t-1} + \sum_{h=1}^{r} \alpha_{31,h}EC_{h,t-1} + \varepsilon_t \qquad (15)$$

$$\Delta Y_{4t} = \varphi_4 + \sum_{k=1}^{n-1} \alpha_{41,k}\Delta Y_{1,t-1} + \sum_{k=1}^{n-1} \alpha_{42,k}\Delta Y_{2,t-1} + \sum_{k=1}^{n-1} \alpha_{43,k}\Delta Y_{3,t-1} + \sum_{k=1}^{n-1} \alpha_{44,k}\Delta Y_{4,t-1}$$

$$+ \sum_{k=1}^{n-1} \alpha_{15,k}\Delta Y_{4,t-1} + \sum_{h=1}^{r} \alpha_{41,h}EC_{h,t-1} + \varepsilon_t \qquad (16)$$

$$\Delta Y_{5t} = \varphi_5 + \sum_{k=1}^{n-1} \alpha_{51,k}\Delta Y_{1,t-1} + \sum_{k=1}^{n-1} \alpha_{52,k}\Delta Y_{2,t-1} + \sum_{k=1}^{n-1} \alpha_{53,k}\Delta Y_{3,t-1} + \sum_{k=1}^{n-1} \alpha_{54,k}\Delta Y_{4,t-1}$$

$$+ \sum_{k=1}^{n-1} \alpha_{55,k}\Delta Y_{5,t-1} + \sum_{h=1}^{r} \alpha_{51,h}EC_{h,t-1} + \varepsilon_t \qquad (17)$$

Where, $EC_{h,t-1}$ is the hth error correction term, the residuals from the hth cointegration equation, lagged one period, $\alpha_{ij,k}$ describes the effect of the kth lagged value of variable j on the current value of variable of i: i,j = Y_1, Y_2, Y_3, Y_4, Y_5. This formed the base of our estimation.

4.0   RESULTS AND DISCUSSIONS

A descriptive analysis of the variables was performed (see Table 2). It show that, the mean, median, standard deviation, skweness, Jarque-Bera, etc of Nigeria's Real Gross Domestic Product (a proxy for Growth Rate) (RGDP), Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI), Official Direct Assistance (ODA), and Exchange Rate (EXCR) from 1986 to 2015. From the result of the summary statistics we observe that the mean for RGDP, FDI, FPI, ODA, and EXCR, variables is 407396.8, 138530.4, -66551.98, 1.34E+09, and 73.25503, respectively. This indicates that the variables, during the study period, have positive values, except FPI which has a negative mean value implying the outflow of PDI.

Table 2: Descriptive Statistics Results

	RGDP	FDI	FPI	ODA	EXCR
Mean	407396.8	138530.4	-66551.98	1.34E+09	73.25503
Median	312183.5	152411.0	-594.9000	3.83E+08	92.34280
Maximum	672202.6	326537.9	92518.90	1.24E+10	152.3297
Minimum	204806.5	9313.600	-560498.5	12300000	2.020600
Std. Dev.	174040.0	102882.4	144627.2	2.60E+09	59.58708
Skewness	0.514454	0.051528	-1.821442	3.359866	0.022490
Kurtosis	1.619963	1.695838	6.190638	13.92811	1.174991
Jarque-Bera	3.333548	1.925391	26.38213	185.1506	3.749268
Probability	0.188855	0.381862	0.000002	0.000000	0.153411
Sum	10999713	3740320.	-1796903.	3.61E+10	1977.886
Sum Sq. Dev.	7.88E+11	2.75E+11	5.44E+11	1.76E+20	92316.12
Observations	30	30	30	30	30

Source: *Authors' Computation (2016)*

These suggestthat, other than FPI, other variables have on the average grown during this period or at least not declined. The high values of standard deviation suggested a wide variation of individual values from the means. The Jarque-Bera test of normality indicates that FPI and ODA are not normally distributed. This violates one of the basic assumptions of ordinary least squares (OLS), by which the application of OLS as techniques of analysis was not necessary. However, since the analysis was based on higher technique other than OLS, this mis-normal was overcome.

Further analyses were based on the hypothesis that, there is no significant relationship between public expenditure and economic growth in Nigeria. The result of the descriptive statistics of the variables employed in the estimations in this study is presented in Table 2.

We also tested for co-integration among the variables and conducted the ECM. In conducting stationarity tests of the variables in equations 3 and 4, we used the Augmented Dickey-Fuller (ADF) unit root test which is derived from Dickey and Fuller (1979, 1981). The results are presented in Tables 3.

Table 3: ADF Test Results at Level

Variables	ADF test Statistic	ADF Critical Value	Level of Significance	Order of Integration	Remark
RGDP	-6.285554	-2.991878	5%	I(0)	Stationary
FDI	-8.103128	-2.986225	5%	I(1)	Stationary
FPI	-7.255616	-2.986225	5%	I(0)	Stationary
ODA	-5.233673	-2.991878	5%	I(1)	Stationary
EXCR	-4.732754	-2.986225	5%	I(1)	Stationary

Source: *Authors' Computation (2016)*

The results of the ADF unit root test results in Table 3 reveal that economic growth (RGDP) and foreign portfolio investment (FPI) were stationary at levels; while foreign direct investment (FDI), official direct assistance (ODA), and exchange rate (EXCR), were stationary at first difference, meaning that the short-run information of these variable is lost. Due to this, the series could best be analyzed by performing a long-run test of co-integration.

In order to test for the long-run relationship, unit root for the variables were further tested at their first difference. The result of the unit root test revealed that the remaining variables – RGDP and FPI – were also stationary in their first differences. Therefore, the variables of the model were all integrated of order one i.e. I(1).

Having stabilized and stationarized the data, the conducted the co-integration test. The co-integration tests are based on the Johansen and Juselius co-integration test. Table 4 present the co-integration test result.

Table 4: Co-integration Tests

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.942627	155.8196	29.79707	0.0001
At most 1 *	0.405477	35.77631	15.49471	0.0000
At most 2 *	0.282384	13.93649	3.841466	0.0002
Trace test indicates 3 cointegratingeqn(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 No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.942627	120.0433	21.13162	0.0001
At most 1 *	0.405477	21.83983	14.26460	0.0027
At most 2 *	0.282384	13.93649	3.841466	0.0002
Max-eigenvalue test indicates 3 cointegratingeqn(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 (2016)*

The co-integration results in Table 4 for the variables (i.e. RGDP, FDI, FPI, ODA, EXCR) reveal that, both the trace statistic and the max-eigen value indicate 3 cointegrating equations at 5 percent level of significance. This suggests that there is a long-run relationship between economic growth and public expenditure. We

therefore reject the null hypothesis of no co-integration amongst the variables but do not reject the alternative hypothesis.

The confirmation of the existence of a co-integrating vector among the series in the models gave us the confidence in carrying out short run dynamic adjustment. Thus, adopting the general-to-specific framework, we proceed to estimate an over-parameterized error correction model from where a parsimonious error correction mechanism is obtained as shown in Tables 5.

Table 5: Parsimonious ECM

Dependent Variable: D(RGDP)
Method: Least Squares
Sample (adjusted): 1986 2015
Included observations: 30 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-136832.6	253448.1	-0.539884	0.5931
D(RGDP(-1))	0.548055	0.115300	4.753285	0.0000
D(RGDP(-2))	0.416106	0.080500	5.168992	0.0000
D(FDI(-1))	14.34272	3.496813	4.101654	0.0003
D(FDI(-2))	8.379418	2.961078	2.829854	0.0081
D(FPI)	21.17291	1.912853	11.06876	0.0000
D(ODA(-1))	-6.416861	2.821032	-2.274650	0.0300
D(EXCR)	-3.215029	0.887472	-3.622682	0.0010
ECM(-1)	-0.470435	0.083556	-5.630143	0.0000

R-squared	0.950845	Mean dependent var	1956462.	
Adjusted R-squared	0.936574	S.D. dependent var	4995292.	
S.E. of regression	1258042.	Akaike info criterion	31.13623	
Sum squared resid	4.91E+13	Schwarz criterion	31.55418	
Log likelihood	-628.2927	Hannan-Quinn criter.	31.28842	
F-statistic	66.62827	Durbin-Watson stat	2.101918	
Prob(F-statistic)	0.000000			

Source:*Authors' Computation (2016)*

Table 5 presents the parsimonious ECM for model. It shows that the explanatory variables included in the model explained 93.7 percent of the variations in economic growth in Nigeria. The F-statistic of 66.628 (F-table = 2.84) shows that the model is statistically significant and that the independent variables are significant explanatory

factors of the dependent variable. The above implies that the model has a goodness of fit. This implies that, foreign resources in the form of FPI, FDI, and ODA are relevant determinants of economic growth in Nigeria. This, therefore, shows the how significant the external sector is to the Nigerian economy. To support the suitability of the model, the Durbin Watson Statistic of 2.102 reveals that there is minimal or absence of serial autocorrelation among the variables used in the model. Also, the error correction coefficient (ECM) is significant and appropriately signed. This reveals that economic growth in Nigeria, proxied by real gross domestic product (RGDP), can adjust to changes in these external sector's explanatory variables and be able to attain a long-run growth.

Furthermore, the values of the coefficient of past (lag 1 and 2) of FDI and current value of FPI have significant positive sign. This indicates that these variables have positive influence on the economy that spans for up to 2 years. However, the first lag (lag 1) of ODA and current value of EXCR are significantly negatively related with economic growth. This means that though ODA may have positive impact on economic growth in Nigeria, that does not go beyond the current year of its flow into the country. As such, having rather a negative consequence on the economy. This could be as a result of the dumping effect of some of the ODA and leakage created by others. Equally, the weakening of the value of Naira in relation to other foreign currencies makes EXCR to have negative effect on economic growth. This is because, a weak price of Naira, does not only discourages FDI and FPI but make foreign productive goods expensive and results to unfavourable balance of payments. These, cumulatively, hinder the economy from growing but rather retards.

However, on the whole, the analysis has revealed a long-run relationship between the economic growth and the flow of foreign resource into the Nigerian economy. This is evident from the ECM results as have shown above. This means that, an increase in FDI and FPI will increase economic growth in Nigeria in the long-run. This led to rejection of the null hypothesis which held that there is no significant relationship between the flow of foreign resources and economic growth in Nigeria, and its alternative retained. The findings of this study partly agree with the work of Mohey-ud-din (2006) who found a high positive impact of foreign capital inflows on the GDP growth in Pakistan. It also agrees with Obwona & Egesa (2007), Osabuohien

(2007), Adofu (2010), Shen, Lee & Lee (2011), Ekwe & Inyiama (2014), Sethi (2013) who found apositive relationbetween economic growth and foreign direct investment.

On the contrary, ODA and EXCR have shown to reduce economic growth within the period under review. The negative signs of ODA and EXCR do not conform to the *apriori* expectation of a positive relationship between these variables and economic growth. the negative effect of ODA on economic growth in Nigeria within the period under review could be blamed on lack of prudent fiscal management and institutional weaknesses that tend to deride benefit of ODA to the country.

5.0   CONCLUSION AND RECOMMENDATIONS

The study assessed the impact of the inflow of foreign resources on economic growth in Nigeria from 1986 to 2015 using secondary data. The result has led to the conclusion that foreign resource inflow has impact significantly on economic growth in Nigeria. While foreign direct investment and foreign portfolio investment have positive impact, official direct assistance has negative impact. This tells the contribution of the external sector to the growth of the Nigerian economy. However, the funds that come into the country in the form of direct assistance have not been put to effective use as to trigger economic growth. Also, exchange performance has negative impact on economic growth.

Based on the findings, the following recommendations were made. On the whole, it is recommended that external policies should be designed to favour the inflow of foreign resources as data have shown that they support the growth of the economy. However, though our empirical evidence suggests that FDI and FPI play important role in contributing to economic growth in Nigeria, for such impact to be sustained, Nigeria, like most countries, including both developed and emerging nations, should establish investment agencies, and have policies that include both fiscal and financial incentives to attract foreign resources and improve the local regulatory environment and the cost of doing business.

Another suggestion, based on the finding that official direct assistance (ODA) reduced economic growth, is that, for the economy to benefit from ODA received, it should be targeted toward sectors that will boost the growth of the economic. Such

sectors like manufacturing and agriculture should be on the priority list. These tend to spark a much wider coverage ripple effect on the economy. Also, it the government should be choosy on the kind of ODA inflows. This is because, some tend to save rather as a leakage than the flow then portends to be.

Also, monetary policy and actions concerning exchange rate (EXCR) that will protect domestic economic agents and attract external investors into the country should be put in place.

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APPENDIX 1

Table A. Real Gross Domestic Product, Foreign Direct Investment, Foreign Portfolio Investment, Official Direct Assistance and Exchange Rate (1986-2015)

Year	RGDP (N,m)	FDI (N,m)	FPI (N,m)	ODA (N,m)	EXCR (N/$)
1986	15,237.99	735.8	151.6	12300000	2.0206
1987	15,263.93	2,452.80	4,353.10	119360000	4.0179
1988	16,215.37	1,718.20	2,611.80	184910000	4.5367
1989	17,294.68	13,877.40	-1618.8	546250000	7.3916
1990	19,305.63	4,686.00	-435.2	383270000	8.0378
1991	19,199.06	6,916.10	-594.9	378760000	9.9095
1992	19,620.19	14,463.10	36,851.80	358120000	17.2984
1993	19,927.99	29,660.30	-377	427680000	22.0511
1994	19,979.12	22,229.20	-203.5	270420000	21.8861
1995	20,353.20	75,940.60	-5785	261450000	21.8861
1996	21,177.92	111,290.90	-12055.2	246750000	21.8861
1997	21,789.10	110,452.70	-4785.8	277230000	21.8861
1998	22,332.87	80,749.00	-637.5	287100000	21.8861
1999	22,449.41	92,792.50	1,015.70	209800000	92.6934
2000	23,688.28	115,952.20	51,079.10	245770000	102.1052
2001	25,267.54	132,433.70	92,518.90	263430000	111.9433
2002	28,957.71	225,224.80	24,789.20	419250000	120.9702
2003	31,709.45	258,388.60	-23,555.50	384570000	129.3565
2004	35,020.55	248,224.60	23,541.00	654310000	133.5004
2005	37,474.95	654,193.20	116,035.00	6954730000	132.147
2006	39,995.50	624,520.70	360,291.50	12383000000	128.6516
2007	42,922.41	759,380.40	-332,547.80	1951130000	125.8331
2008	46,012.52	971,543.80	-157,157.20	1271670000	118.5669
2009	49,856.10	1,273,815.80	70,938.50	1671210000	148.8802
2010	54,612.26	905,730.80	556,585.10	2061960000	150.298
2011	57,511.04	1,360,307.90	-792,360.20	1776670000	153.8616
2012	59,929.89	1,113,510.60	-2,687,232.50	2061960000	157.4994
2013	63,218.72	875,102.50	2,130,179.90	1696863333	157.3112
2014	67,152.79	738,197.20	832,392.00	1845164444	158.5526
2015	69,023.93	602,067.80	498,132.20	1867995926	193.2792

Source: CBN Statistical Bulletin, various issues, World bank data base.

UNEMPLOYMENT AND MORTALITY RATES IN NIGERIA: A COINTEGRATION APPROACH

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Abstract

This study investigated the effect of unemployment rates on mortality rates in Nigeria, using time series data. The methods of data analysis are Johansen Cointegration Test and Fully-Modified Least Square Regression (embedded with distributed lag of unemployment). The result shows that the second lag of unemployment rates have significant and positive effect on mortality rates. A one percent increase in unemployment leads to 0.16% increase in total mortality rates, 0.17% increase in adult male mortality rates and 0.15% increase in adult female mortality rates. In addition, GDP per capita was found to have significant and negative effect on mortality rates. A one percent increase in GDP per capita leads to 0.11% decrease in total mortality rates. 0.12% decrease in adult male mortality rates and 0.09% decrease in adult female mortality rates. It can therefore be concluded that Nigerian economic fluctuation, represented by the unemployment rate and GDP per capita, is a determinant of the mortality rates in the country. It is recommended that policy makers put in place policies that will not only decrease the rate of unemployment but also increase GDP per capita in Nigeria.

Key words: Unemployment rate, Mortality rate, GDP per capita, economic fluctuation and time series

JEL: C32; E24

1.0   INTRODUCTION

Numerous studies have shown that increasing rates of unemployment are associated with higher mortality rates (Brenner 1976; Burgard, Brand & House 2007; Sullivan, Wachter & Strully 2009). Increase in mortality rate among the unemployed may be triggered by reduced income, disrupted social ties, feelings of hopelessness or worthlessness, and difficulties in meeting financial obligations, leading to depression, substance abuse, or other harmful conditions and behaviors

(Martikainen, Maki & Jantti, 2007; Bartley, Ferrie & Glossary 2001). Unemployed people not only lose materially, they lose access to social networks, self-esteem, self-confidence, a scheduled life structure, a sense of identity and possibly a purpose for their lives (Winkelmann &Winkelmann 1998). Neumayer (2004) opined that the stress, anxiety and psychological hardship connected to loss of job or fear of loss of job are also detrimental to health because the affected individuals may resort to medication, alcohol and other drugs to alleviate their stress and hardship. Given this line of argument, empirical evidence from Gerdtham and Johannesson (2002) shows that people who are unemployed suffer from deteriorating mental and physical health and wellbeing, which make unemployment a cause of ill-health and a significant predictor of mortality in many instances.

Contrariwise, some studies that were conducted in US and Europe revealed procyclical association of unemployment rates and mortality rates, depending on the state of the economy. They found that higher unemployment rates are associated with lower mortality (Ruhm 2000; Ionides, Wang & Granados 2013). They established that after long-term trends, higher unemployment, that is typical of economic recessions, leads to lower mortality, while lower unemployment, that is typical of economic expansions, leads to higher mortality, so that mortality fluctuates with the business cycle procyclically. This trend of fluctuations was also found for cardiovascular and infectious disease mortality, traffic deaths and industrial injuries (Kossoris 1939; Miller, Douglas, Marianne, Page, Stevens & Filipski 2009). The major exception is suicide mortality, which rises during recessions and falls during expansions, oscillating counter cyclically (Ruhm 2000; Luo, Florence, Quispe-Agnoli, Ouyang & Crosby, 2011). Explanation being that recession is associated with lower road-traffic injuries, alcohol related deaths, hospital admissions and decrease in exposure to hazardous working conditions(Gerdtham & Ruhm, 2002; Ruhm, 2008; Suhrcke & Stuckler, 2012), while economic expansion is associated with atmospheric pollution and long working hours necessitating use of tobacco, alcohol, medication and drugs, consumption of calorie-rich food and forgoing of regular medical check-up, and increase in work-related accidents and health injuries (Neumayer, 2004; Grenados, House, Ionides, Bugard & Schoeni, 2014; Rhum 2003).

Empirical evidence however revealed that procyclical nexus between unemployment and mortality is paramount only in high income countries where citizens' average level of wealth may serve as a cushion against any income shocks, and as social safety nets that provide formal insurance mechanisms. In poor

countries, with large shares of the population living in or close to abject poverty, any aggregate income shock is likely to push many people below subsistence levels (Suhrcke & Stuckler, 2012). Evidence shows that in Africa and low-income Asia, infant mortality rises, while school enrolment and nutrition fall during recessions. In middle-income countries of Latin America, health outcomes are generally pro-cyclical, while education outcomes are counter-cyclical (Ferreira & Schady, 2009). Theoretically, Okun's model of unemployment states that unemployment is negatively correlated with economic growth. He found that a percentage decrease in unemployment rate leads to 3 percent increase in economic growth (Okun's, 1962). His theory lays credence to the findings of current studies about counter-cyclical nature of unemployment in relationship with mortality rate. During the period of economic boom, that is associated with lower unemployment rates, mortality rates is expected to be low. Many procyclical studies like Rhum (2000, 2003, 2006 & 2008) found opposite of this theory.

A survey of literature shows that most of the studies on unemployment and mortality nexus are based on high income economies, very few are available for low income countries. Specifically, none was found for Nigeria. This study is therefore aimed at investigating nature of association between mortality rate and unemployment in Nigeria, taken into cognizance the methodological approaches used by previous authors. Apart from the present introductory part of the work, the second section contains the review of related literature on the subject matter, the third contains research methodology, and the fourth contains presentation of results while the last section contains conclusion and recommendations of the study.

2.0   LITERATURE REVIEW

Numerous empirical studies have found statistical but inconsistent results about the relationship between unemployment rates and mortality. The studies can be divided in to two categories; the first group used time series data, while the second category used longitudinal panel data. Across the two groups, there are divergent opinions as to how unemployment and mortality rates are associated.

The first group is spearheaded by Brenner, whose empirical studies for United States (1973, 1976, 2005), Sweden (1975), England and Wales (1979); European Union and United states (2000) have repeatedly shown that population health outcomes (infant mortality rates, admissions to mental health hospitals, suicides, homicides and cardiovascular disease) decrease during economic expansions and increased

during downturns. Particularly in Brenner (2005), he investigated the effects of real GDP per capita, unemployment rate, and the employment to population ratio on age-adjusted mortality rates over the period of 1901 to 2000, in the United States. Using Engle-Granger Cointegration method and Shiller lag estimation approach, he found that the net effect of increased unemployment leads to a substantial increase in mortality, while increases in GDP per capita leads to a significant decrease in mortality rates during. He emphasised that the use of preference criterion, the occurrence of the independent variable prior to that of dependent variable, is necessary to get a stable and reliable long term effect of unemployment on mortality. In his study, he used lag of 11 years for the independent variables. He found that within short time, the results show counter apriori-expectations for both unemployment and real GDP per capital, but becomes stable over medium-to-long-time phenomenon.

In contrast to the findings of Brenner, Grenados (2005), in an investigation of the relationship between annual national fluctuations in a number of macroeconomic indicators and mortality of US economy between 1900 and 1996, found that higher mortality rates are associated with higher unemployment only during recessions, and that as the economy expands, the situation reversed as the economy improves. He used Stuart Mill's Concomitant Variation approach and Hodrick–Prescott filter to transform the variables, before regressing the percentage change in mortality on GDP growth and the rate of change of unemployment. Also in Tapia Granados (2012) for England and Wales economies; Granados and Ionides (2008) for Sweden economy, negative relationships were found between economic expansions and mortality rates.

The second strands of studies are those that used longitudinal data to examine the relationship between mortality rate and unemployment. The researchers in this category are divided into pro-cyclical business cycles researchers, who found that lower unemployment rates are associated with higher mortality rates increases during economic expansions, and higher mortality rates associated with lower unemployment during economic recessions. Ruhm (2000) is one the famous studies in this category. Using United States state-level longitudinal data from 1979 to 1991, he used fixed effect method to investigate the relationship between unemployment and mortality rates. He found that an increase in the unemployment rate is associated with a decrease in the overall mortality rate. He also found that an increase in unemployment leads to a decrease in deaths from all preventable causes of death, with the exception of Suicide and homicide, that are countercyclical in nature. Using

fixed effect method to investigate the relationship between mortality rates and per capita disposable income of 23 member nations of the Organization for Economic Co-operation and Development (OECD) over the 1960-1997, Gerdtham & Ruhm (2002) also found that total mortality and deaths from several common causes increase when labor markets strengthen. They found that decrease in the national unemployment rate is associated with a rise in total mortality and increases in deaths from cardiovascular disease, influenza/pneumonia, liver disease, motor vehicle fatalities and other accidents. Similarly, an application of fixed effect on German state level data by Neumayer (2004) equally showed a procyclical relationship between unemployment and mortality due to cardiovascular disease, pneumonia and influenza, motor vehicle accidents and suicides. Other studies like Ariizumi and Schirle (2010), Granados, House, Gerdtham and Johannesson, 2005; Ruhm, 2008; Granados and Roux 2008 found similar trend between unemployment rates and mortality rates in their respective studies.

Aside from longitudinal studies that found procyclical relationship between unemployment rates and mortality rates, studies like Sullivan and Von Wachter (2009); Crost and Friedson (2015) found countercyclical nexus between the two variables. In Sullivan and Wachter (2009), where fixed effect method was also applied on administrative records of Pennsylvania workers of 1970s, 1980s and death records of 1960s. They found out that job loss by high tenured male workers lead to increase in their mortality rate by fifty to hundred percent in the first year after job loss. The trend continues, as mortality rates of displaced workers remained ten to fifteen percent higher after 25 years. Similarly, Crost and Friedson (2015) used fixed effect method to investigate the effect of education specific unemployment rates on mortality to get better likelihood of being directly impacted by a recession. They found that among the working-age population, higher education-group specific unemployment rates are positively associated with mortality rates. Their findings suggest that the unemployment rate of an educated group in a given state is positively related to mortality in that group. They explained further that part of the education specific mortality effect is driven by the loss of health insurance coverage that comes with unemployment. Other studies like Economou, Nikolaou, and Theodossiou, 2008; Elliason and Storrie 2009; Stevens, Miller, Page and Filipski (2013); & Hoynes, Hillary, Miller, and Schaller (2012) also found counter-cyclical relationship between unemployment and mortality rates even with longitudinal date panels.

In other to isolate the effect of the level of economic development from unemployment-mortality nexus, some studies have investigated the difference in

response of health outcomes to economic fluctuations in high income and low income countries. Using fixed effect method, Ferreira and Schady (2009) found that in richer countries (like United States) child health and education outcomes are counter-cyclical: they improve during recessions. But in poorer countries like Africa and low-income Asia, the outcomes are pro-cyclical: infant mortality rises, and school enrolment and nutrition fall during recessions. In the middle-income countries of Latin America, health outcomes are generally pro-cyclical, and education outcomes counter-cyclical. Similarly, using fixed effects method to investigate the relationship between mortality rate and some selected macroeconomic variables of Organisation for Economic Co-operation and Development countries, Morin (2009) found that long-run economic growth (captured by GDP per capita) decreases mortality, while short-run growth is detrimental to health in rich countries. Government programs to artificially boost economic growth leading to bubbles may negatively affect the population's health. But in poorer countries, particularly the ones with GDP per capita levels below $10,000, both long-run and short-run growth lower mortality rates, so any move that boosts economic output will improve the health of the country's people.

In spite of the convergence of Ferreira and Schady (2009), and Morin (2009) about the nature of association of unemployment and mortality in developed countries and less developed countries, Hopkins (2006) showed that counter cyclical effect of unemployment cannot be generalized to all developing countries in his investigation of effect of economic shocks on macroeconomic activities and health status of three East Asia Countries. Her descriptive statistics showed that East Asian crisis was associated with short term increases in the mortality rate in Indonesia and Thailand, but there was a little impact on health outcomes in Malaysia. The inconsistent findings about the relationship between unemployment rates and mortality rates in different studies show that nexus between the two variables vary across countries, depending on the nature of economic situations, and sometimes, due to methodological difference among researchers. The findings show that the nexus differ across. This study is therefore necessary to investigate the nature of relationship between unemployment and mortality rate in Nigeria.

3.0   RESEARCH METHODOLOGY

3.1   Nature and sources of data

This study uses time series data on male and female mortality rates, real per capita income, percentage of population of people under 15 years, percentage of population over 64 years, total population size and GDP per capita extracted from World Bank Development Indicators, while unemployment rates were sourced from National Bureau of Statistics. The data ranges from 1970 to 2016.

3.2   Model specification

Three categories of mortality rates (adult female mortality rates, adult male mortality rates and total mortality rates are used, each serving as separate dependent variables in three regressions. Unemployment rates will be the main independent variable, while GDP per capita, total population size, percentage of population under 15 years and percentage of population over 64 years were used to control for variables. To evaluate long term effect of unemployment on mortality, 1 to 2year time-lag of unemployment rates was introduced in to the model. The choice of variables for this study follows Neumayer (2004) and the use of distributed lag effect of unemployment follows Neumayer (2004), Rhum (2000) and Brenne (2005).

The implicit form of the models can be specified below:

Ltotmort = f (Unempl, LGDPC, Pop15, Pop64, Ltopup)………………………...1

Lmlmort = f (Unempl, LGDPC, Pop15, Pop64, Ltopup)………....…..…..….…2

Lflmort = f (Unempl, LGDPC, Pop15, Pop64, Ltopup)……………...……..…....3

Where

Ltotmort = log transformed total mortality rates, Lmlmort = log transformed adult male mortality rates, Lfltmort = log transformed adult female mortality rates, Unempl = unemployment rates, LGDPC = log transformed GDP per capital, Popu15= percentage of population under 15 years, Popu64= percentage of population above 64 years, Ltopup= log transformed total population size of the country. The structural form of the models can be specified below:

$$\text{Ltotmort} = \beta_1\text{Unempl} + \beta_2\text{GDPC} + \beta_3\text{Popu15} + \beta_3\text{Popu64} + \beta_3\text{Topup} + \mu \dots\dots\dots\dots\dots..4$$

$$\text{Lmlmort} = \gamma_1\text{Unempl} + \gamma_2\text{GDPC} + \gamma_3\text{Popu15} + \gamma_3\text{Popu64} + \gamma_3\text{Topup} + \mu \dots\dots\dots\dots\dots.5$$

$$\text{Lfltmort} = \varphi_1\text{Unempl} + \varphi_2\text{GDPC} + \varphi_3\text{Popu15} + \varphi_3\text{Popu64} + \varphi_3\text{Topup} + \mu \dots\dots\dots\dots..6$$

A priori expectation; $\beta_1>0$, $\beta_2<0$

It is expected that an increase unemployment rates (Unempl) will lead to increase in total mortality (Ltotmort), adult male mortality (Lmlmort) and adult female mortality (Lflmort) rates in equations 4, 5 and 6 respectively. Also, increase in real GDP per capita income is expected to lead to decrease in mortality rates in the three equations. Equations 4, 5 and 6 would be used to estimate model 1, 2 and 3 respectively.

3.3 Unit Root Test

Augmented Dickey Fuller unit root test was carried out to establish the order of integration of variables. This augmented version of unit root test includes extra lagged terms of the dependent variable in order to eliminate autocorrelation This test is necessary to know the level of stationarity of the variables, and apply appropriate cointegration technique to check the nature of long run cointegration among the variables (Dickey and Fuller 1979; 1981). It can be specified as below:

$$\Delta y_t = \alpha_0 + \alpha_1 t + \sum_{i=1}^{p} {}_i \Delta y_{t-i} + \mathcal{E}_t \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 7$$

Where, y is the variable in consideration, Δ is the first difference operator, α_0 is intercept or constant, α_1 is a trend term, ρ is a lag order of the autoregressive process, and $?_t$ is the error term.

3.4   Cointegration Test

The Johansen Cointegration approach was used when more than two variables are involved in a model. It helps to detect the number of cointegrating equations in a model, and detect the speed of adjustment from short to long run equilibrium. For instance, the first model consists of ltotmort, Unempl, GDPC, Popu15, Popu64, and Topup. They can all be represented by the matrix Z_t = [ltotmort$_t$, Unempl$_t$, GDPC$_t$, Popu15$_t$, Popu64$_t$, and Topup$_t$]. The matrix can be mathematically represented below:

$$Z_t = A_1 Z_{t-1} + A_2 Z_{t-2} + \ldots A_k Z_{t-k} + U_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 8$$

The Z_{t-1} represents the endogenous variables in their respective lag forms, A_k represents the coefficients of the variables, while U_t represents the error term. The equation can be reformulated in a vector error-correction model (VECM) as follow:

$$\Delta Z_t = r_1 \Delta Z_{t-1} + r_2 \Delta Z_{t-2} + r_{k-1} \Delta Z_{t-k-1} + \pi Z_{t-1} + U_t \ldots\ldots\ldots\ldots 9$$

Where $r_i = (1 - A_1 - A_2 - \ldots - A_k)$ $(i = 1, 2, \ldots, k\text{-}1)$ and $= -(1 - A1 - A2 - \ldots - A_k)$. The

π matrix contains information regarding the long-run relationships. π can be decomposed into $\alpha \beta^i$ where α includes the speed of adjustment to equilibrium coefficients while β^i is the long-run matrix of coefficients. Therefore, the

$\beta^i Z_{t-1}$ term is equivalent to the error-correction term $(Y_{t-1} - \beta_0 - \beta_1 X_{t-1})$ in the single-equation case, except that $\beta^i Z_{t-1}$ contains up to (n-1) vectors in a multivariate framework. The Johansen Cointegration method was also applied to the remaining two models.

3.5 Fully Modified Ordinary Least Squares (FMOLS)

After the Cointegration relationship has been established among the variables in the models, Fully Modified Ordinary Least Squares (FMOLS), developed by Phillips and Hansen (1990), was used to estimate the relationship that exists in the models. It provides consistent and efficient estimates in the presence of cointegration, explicates serial correlation effects and checks for endogeneity among regressors.

4.0   PRESENTATION OF RESULTS

4.1   Descriptive statistics

The descriptive statistics of the variables used in this study are presented in table 4.1.

Table 4.1: Descriptive Statistics

	FLMORT	M LMORT	TOTMORT	UNEMPL	POPU15	POPU64	TOPOP	GDPC
Mean	415.8183	371.8540	787.6723	9.4489	44.0192	2.8120	10900	257770.5
Maximum	466.7358	409.6812	876.4170	27.4000	45.1434	2.8879	17700	383023.4
Minimum	376.6746	347.3872	727.0618	1.6000	42.5727	2.7318	56131844	172402.7
Jargue-Berra	1.6787	3.5562	2.8919	7.3627	0.3416	3.2913	3.3249	3.7342
Probability	0.4320	0.1690	0.2355	0.02519	0.8430	0.1929	0.1897	0.1546
Observations	47	47	47	47	47	47	47	47

Source: Extracted from the ADF test results using e-views version 10

As shown in the table 4.1, the minimum value of adult female mortality rate (FLMORT) is about 377 per a thousand deaths, that of adult male is about 347 per a thousand death while that of total mortality rate (TOTMORT) is about 727 per two thousand deaths. Their respective maximum values are 467, 410 and 876. The table shows that the three dependent variables are normally distributed as their skewness are approximately zero, their kurtosis approximately 3 and the probabilities of Jargue-Berra above 5% level of statistical significance. This shows that models are likely to yield robust results since the dependent variables are well behaved. The unemployment rate (UNEMPL) is also normally distributed at 10% level of statistical significance, since the probability of its Jague-Berra is less than 10% level of statistical significance. The GDP per capita and the remaining control variables are also normally distributed since the probability values of their Jague-Berra statistics are less than 5% level of statistical significance.

4.2 Unit Root Test

The results of unit root tests extracted from section 3 of the appendix are presented table 4.2.

Table 4.2: Stationarity Test of the Variables

Augmented Dickey-Fuller Statistics of the Variables

Variable	At levels	First difference	Critical values				Order of Integration
			1%	5%	10%	Prob. value	
Totmort	-0.5723	-1.8985	-2.6186	-1.9485	-1.6121	0.0557	(1)
Mlmort	-0.4308	-1.9383	-2.6186	-1.9485	-1.6121	0.0511	(1)
Fltmort	-0.7186	-1.8609	-2.6186	-1.9485	-1.6121	0.0604	(1)
Unempl	-1.0878	-6.6998	-2.6174	-1.9483	-1.6122	0.0000	(1)
GDPC	0.6437	-1.6470	-2.6162	-1.9481	-1.6123	0.0000	(1)
Popu15	0.0657	-1.6501	-2.6241	-1.9493	-1.6117	0.0928	(1)
Popu64	-0.5952	-2.2821	-2.6241	-1.9493	-1.6117	0.0234	(1)
Topup	-8.1575	-3.7388	-3.5847	-2.9281	-2.6022	0.0066	(1)

Source: Extracted from the ADF test results using e-views version 10

As shown in the table 4.2, all the variables are stationary at their first differences. Unemployment rate (Unempl), GDP per capita, percentage of population above 64 years and total population size are integrated at 5% level of statistical significance, given that their probability values are less than 5% level of statistical significance. On the other hand, total mortality rate (Totmort), male mortality rate (Mlmort), female mortality rate (Flmort), and percentage of population of people of under 15 years are integrated at 10% level of statistical significance, as their probability values are less than 10%. Therefore, the null hypotheses of no stationarity are rejected. Given that all the variables are integrated of order one, Johansen cointegration technique will be used to test for existence of long run among the variables in models 1, 2 and 3.

4.3 Cointegration Regression Results

Table 5.1, 5.2 and 5.3 of the appendix contains the results of Johansen Cointegration tests for equations 4, 5, and 6 respectively. The results of the cointegration tests showed that the probability values of the trace and maximum eigen values of the three models are less than 5% level of statistical significance. This led to rejection of the null hypothesis of no long-run relationship between mortality rates and unemployment in Nigeria. This implies that there is long-run relationship between

mortality rates and unemployment in Nigeria. In order to establish the extent of the relationship, the estimates of FMOLS are presented in table 4.3.

Table 4.3 Fully Modified Ordinary Least Square Results

Variable	Model 1		Model 2		Model 3	
Unempl	-0.0006	(0.0006)	-0.0006	(0.0007)	-0.0007	(0.0005)
Unempl(-1)	0.0002	(0.0007)	0.0000	(0.0008)	0.0003	(0.0006)
Unempl(-2)	0.0016	(0.0006)**	0.0017	(0.0007)**	0.0015	(0.0005)**
LGDPC	-0.1052	(0.0119)***	-0.1210	(0.0145)***	-0.0910	(0.0101)***
Intercept	11.9367	(0.0746)***	11.4605	(0.4851)	11.0454	(0.3370)***
R^2	0.9537		0.9341		0.9721	
Adjusted R^2	0.9447		0.9213		0.9666	
Number of observations	44		44		44	
Estimation Method	Fully-modified OLS		Fully-modified OLS		Fully-modified OLS	

Notes: Standard errors in parentheses; *** significant at the 1% level;   ** significant at the 5%; *significant at the 10%;

Source: Extracted from the Fully-modified OLS results using e-views version 10

The table 4.3 contains extract from the FMOLS for equations 4 (Model 1), 5 (Model 2) and 6 (Model 3). The coefficients of unemployment rates in the three models are not statistically significant, and are wrongly signed. When the variable was lagged once, it is still not statistically significant, but has expected (positive) sign in the three models. The variable becomes statistically significant (at 5%) in the second lags, implying that unemployment rates significantly influence mortality rate after two years. In the first model, it shows that one percent increase in unemployment leads to 0.16% increase in total mortality rates. In the second model, it shows that one percent increase in unemployment rates leads to 0.17% increase in adult male mortality rates. In the third model, it shows that one percent increase in unemployment leads to 0.15% increase in adult female mortality rates.

The table equally shows that GDP per capita income statistical and negatively influence mortality rates, across the three categories, at 5% level of statistical

significance. In the first model, it shows that one percent increase in GDP per capita leads to 0.11% decrease in total mortality rates. In the second model, it shows that one percent increase in GDP per capital leads to 0.12% decrease in adult male mortality rates. In the third model, it shows that one percent increase in GDP per capital leads to 0.09% decrease in adult female mortality rates.

4.4 Robustness Check

To show that the models estimated in this study are stable, consistent and free from violations of regressions assumptions, diagnostic tests of heteroskedasticity, serial correlation and normality test were conducted. Also included in the table is the cointegration coefficient that was extracted from Vecto-autoregression Model (VECM) of the models. The results is presented in table 4.4.

Table 4.4: Robustness Check for the Models

Diagnostic Tests	Model 1		Model 2		Model 3	
	Statistics	P-value	Statistics	P-value	Statistics	P-value
Autocorrelation (Breusch-Godfrey LM test)	34. 8830	0.5379	35.5441	0.5067	0.3433	0.5639
Heteroskedasticity (Breusch-Pagan-Godfrey)	534.8595	0.6252	529.9988	0.6804	532.7428	0.6496
Normality Test	0.2060	0.9021	0.2535	0.8810	0.2143	0.8984
Error correction coefficient	-0.0390	-	-0.0469	-	-0.0263	-

Source: Extracted from Diagnostic Tests andVecto-autoregression model using e-views version 10

As shown in table 4.4, the probability values of the three diagnostic tests (autocorrelation, heteroscedasticity and normality tests) for the three models are greater than 5% level of statistical significance. This implies rejection of the null hypotheses. The models are free from misspecification problem, the successive errors are not correlated with each other, and there is equal variance among the errors of the models. Also, the coefficients of the vecto-autoregression models are all less

than one and negative, confirming the stability of cointegration and VECM estimates. Even the correlation matrix in section 5.4 of the appendix shows that the correlation coefficients of the variables are low, as such, the possibility of multicollinearity problem is ruled out.

4.   DISCUSSION OF RESULTS

This study is conducted to examine the effect of unemployment on the mortality rates, using Nigerian time series data from 1970 to 2016. It is meant to contribute to the ongoing debated whether job loss, or a total unemployment shortens people's lives. The long run cointegrating relationship between unemployment and mortality rates is estimated using fully-modified ordinary least square regression, presented in table 4.3. In other to get robust and stable results, population of people under 15 years, population of people of over 64 years, total population size and GDP per capita were used as control variables. This is in line with the likes of Rulm (2000), Neumer (2004), Brenne (2005) and who have previously conducted similar study. It was discovered that increase in unemployment rates leads to increase mortality rates aggregately, among male adults and female adults in Nigeria. This is similar to the findings of Brenne (2005), Viren 2005; Economou, Nikolaou, and Theodossiou, 2008; Hoynes, Hillary, Miller, and Schaller (2012); who have also found, in their respective findings that unemployment is positively associated with mortality rates. When people lose their jobs, or could not find any job to do, they find it difficult to eat regular and balance diet, they suffer from deteriorating mental and physical health and wellbeing, which leads to depression, substance abuse, or other harmful conditions and behaviors, all of which have serious health effects.

The significant positive relationship between unemployment and mortality rates found in this study is at variance with procyclical studies like Rhum (2000), Neumayer (2004), Gerdtham & Ruhm (2002), Neumayer (2004), Ariizumi and Schirle (2010), Gerdtham & Johannesson, (2005). This is because Nigeria is a low income country, where a slight shock to people's income has devastating effect on their well-being, the situation is different from the high income countries, where procyclical relationship was found between unemployment and mortality rates. This study also share similarity with Ferreira and Schady (2009) and Morin (2009), who found higher mortality rate was associated with bad economic signals in developing nations, opposite of which is the case in developed nations.

Similar to the findings of Martikainen, Makela, Koskinen and Valkonen (2001); Singh and Siahpush (2002), Morin (2009), it was found that GDP per capita income is strongly negatively related to mortality rates, across all categories. This is justifiable because when income per individual in a country increases, it is likely to increase access to health improving activities and goods. They get increasing access to social media, higher ability to get regular and balance diet. While checking for the robustness of the models in the study, it was found that the three models are free from statistical problems of misspecification error, serial correlation and heteroskedasticity. Therefore, its findings are reliable and can be useful for fellow researchers, policy makers and other stakeholders of public health.

5.   SUMMARY AND RECOMMENDATION

This study found that unemployment rates, across all categories, are statistically significant in influencing mortality rates. Just like many other previous researchers, this study found that increase in mortality rates leads to increase in mortality rates in Nigeria. It is therefore necessary for policy makers to put in place policies that will decrease the skyrocketing unemployment rate in the country. As seen in many studies reviewed in this study, unemployment also increase death from many diseases like cardiovascular disease, influenza/pneumonia and liver disease. It goes to imply that decrease in unemployment rate can also improve the health status of many people in the country.

Also, this study found that increase in GDP per capital is statistically significant in reducing mortality rates, across all categories. This implies that government need to put in place necessary infrastructural facilities, business-friendly macroeconomic policies and security for lives and property to increase output per head in the country. This will increase employment opportunities, reduce mortality rates and fast ward the country towards rapid economic growth and development.

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APPENDIX

Table 5.1: Cointegrating Relationship for Model 1

Date: 05/02/18   Time: 11:36
Sample (adjusted): 1972 2016
Included observations: 45 after adjustments
Trend assumption: Linear deterministic trend
Series: LTOTMORT UNEMPL LGDPC LTOPOP POPU15 POPU65
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.755635	164.6640	95.75366	0.0000
At most 1 *	0.486250	101.2548	69.81889	0.0000
At most 2 *	0.471021	71.28399	47.85613	0.0001
At most 3 *	0.362468	42.62772	29.79707	0.0010
At most 4 *	0.254323	22.37096	15.49471	0.0039
At most 5 *	0.184268	9.165124	3.841466	0.0025

Trace test indicates 6 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Table 5.2: Cointegrating Relationship for Model 2

Date: 05/02/18   Time: 12:25
Sample (adjusted): 1972 2016
Included observations: 45 after adjustments
Trend assumption: Linear deterministic trend
Series: LMLMORT UNEMPL LGDPC LTOPOP POPU15 POPU65
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.763209	163.7339	95.75366	0.0000
At most 1 *	0.490686	98.90795	69.81889	0.0001
At most 2 *	0.458209	68.54684	47.85613	0.0002
At most 3 *	0.351309	40.96749	29.79707	0.0017
At most 4 *	0.234823	21.49158	15.49471	0.0055
At most 5 *	0.189369	9.447399	3.841466	0.0021

Trace test indicates 6 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Table 5.3: Cointegrating Relationship for Model 3

Date: 05/02/18   Time: 12:32
Sample (adjusted): 1972 2016
Included observations: 45 after adjustments
Trend assumption: Linear deterministic trend
Series: LFLMORT UNEMPL LGDPC LTOPOP POPU15 POPU65
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.724433	161.3109	95.75366	0.0000
At most 1 *	0.494651	103.3092	69.81889	0.0000
At most 2 *	0.477658	72.59641	47.85613	0.0001
At most 3 *	0.369913	43.37198	29.79707	0.0008
At most 4 *	0.266059	22.58659	15.49471	0.0036
At most 5 *	0.175186	8.666894	3.841466	0.0032

Trace test indicates 6 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

DETERMINANTS OF FOOD SECURITY AMONG HOUSEHOLDS IN DEKINA LOCAL GOVERNMENT AREA OF KOGI STATE, NIGERIA

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Abstract

This study was carried out to examine the determinants of food security status among households in Kogi State, Nigeria. Questionnaires were administered to elicit information from randomly selected 120 respondents from the three districts in Dekina LGA. The study employed both descriptive statistics and logistic regression in analysing the data. The study revealed that 62% of the respondents are food insecure, 65% of the household heads are married and 93% of the respondents are within ages 25-60. The result of the logistic regression model shows that four: age, sex, household income and household food expenditure per person out of the eleven variables included in the model were significant. Since food security increases with increase in household income, expenditure per person, government should increase the wages and salaries of her employee which will have a strong impact on the household food security since they are mostly in paid employment. We specifically recommend that the federal and state government should ensure that the N18,000.00 minimum wage is implemented at the local government level since most of the residence are employed at this level.

Keywords; food security, determinants, logistic regression

1.1 INTRODUCTION

The fight against hunger and food insecurity is one of the biggest challenges global societies have been facing in the last decades (Pieters, Guariso and Vandeplas 2013). Though Nigeria is the most populated country in Africa and also regarded as the giant of Africa, yet majority of households are food insecure, especially the rural farming households. Several evidences have suggested that majority of the world's food insecure live and work in the rural areas (IFAD, 2001). The problem of food and nutrition security in Nigeria has not been adequately

and critically analysed, despite various approaches at addressing the challenges. (Abdullah, 2015).

Food security is a broad concept which encompasses issues that relate to the nature, quality and security of the food supply as well as issues of food access. The world has been facing the paradox of widespread food insecurity, amid net food surpluses (Iram & Butt, 2004).

Food utilization which is typically reflected in health status is determined by income, quality and quantity of dieting intake which on the other hand is determined by dietary knowledge of the household as to the nature diet (state) of food that provide balance diet. Family size, health status, gender, age income and dietary knowledge are the underlying determinant of food utilization. (Omonona & Agoi 2007).

Food is one of the basic necessities of life and as such there is need to ensure availability and accessibility of food in desired quantity. The problem of food security in Nigeria as a whole has not been adequately and critically analysed and solved despite various approaches in addressing the challenges not has been done in selected study area

The problem of food security has become so endemic that it poses a problem (hunger, starvation) to the economic development of the country. This is because food is needed to keep people healthy and energetic so as to be fit to enable them carry out their normal business activities more productively. Food security is also linked to nutrition and health status, this is because food insecurity leads to ill-health which in turn fight against national development by reducing productivity through loss of man power and labour hours which also has its potentialities of pushing people deeper into the dungeon of poverty. It is against this background that seek to analyse the determinants of food security among the households in Dekina Local Government Area of Kogi state, Nigeria.

2.0 LITERATURE REVIEW

2.1 Meaning of Food Security

Food security for a household means access by all members at all times to enough food for an active, healthy life. Food security include at a minimum the ready availability of nutritionally adequate and safe foods, and an assured ability to acquire without resorting to emergency food supplies, scavenging, stealing, or other coping strategies USDA (2008).

At the 1996 World Food Summit, convened by the Food and Agriculture Organisation of the

United Nations, participants agreed that food security means that 'all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life'(FAO,1996). This definition is mostly accepted by many people and adopted by many government to be the best description of food security. Thus, Napoli, De Muro and Mazziolta (2011) brought four interlinked components from that definition. The first relates to the availability of food in any country or household through any means. The second relates to access to food by people or households. The third has to do with utilization while the fourth has to do with stability and sustainability over time.

The National Food Security Programme in Nigeria defines food security as the physical availability and ability of individuals to have or afford the food at a reasonable cost (NFSP, 2001). USDA Bureau for Africa sees food security as a situation when all people at all times have access to sufficient food to meet their dietary needs for a productive and healthy life (USDA, 1997),

2.2. Empirical Literature

There is a vast literature on the determinants of food security. Feleke, Kilmer and Gladdwin (2005) examined determinants of food security in southern Ethiopia at the household level. They employed the use of logistic regression analysis which they applied on data collected from 247 sample households in southern Ethiopia. The study found that seven factors: technological adoption, farming system, farm size, land quality, household size, per capita aggregate production, and access to market out of the nine factors they included in the model were statistically significant determinants of food security. Among these, technological adoption, farming system, farm size, land quality are supply side factors. Based on their result of full/reduced model and the magnitude of changes in conditional probabilities of food security, they concluded that the supply-side variables are more powerful determinants of food security than the demand side variables.

Sekhampu (2013) studied the determinants of food security status among households receiving government grants in a township of *Kwakwatsi*, South Africa based on a household survey using questionnaires. A Logistic regression model was estimated based on this data with the household food security status (that is food secure and insecure) as the dependent variable and a set of demographic variables as explanatory variables. It was found that about 38 per cent of the sampled households are food secure. The results of the regression analysis

showed total household income, household size, employment and marital status of the household head, employment status of the spouse as important determinants of food security in the area. Household size and the marital status of the head of household were negatively associated with household food security. The age, gender and educational attainment of the household head were not significant predictors of household food security status.

Bashir, Schilizzi and Pandit (2012) studied the determinants of rural household food security for landless households of the Punjab in Pakistan by collecting data from 576 landless households. They employed the use of logit regression and descriptive statistics model to analyse. The research reviewed that about 27% of the sample households were food insecure. Household monthly income, household head's head education were positively impacting household food security while household's heads age and family size had negative impact on household's food security.

Similarly, Muktar (2011) used the logit regression model to study the determinants of food insecurity in Nigeria. The result obtained showed that household income, educational qualification, gender, size of household, assets owned by households and access to credits are among the major determinants of food insecurity.

Irohibe & Agwu (2014) studied the determinants of food security status among farming households in rural areas of Kano state, Nigeria. Data collected were analysed using percentages, mean score, logistic regression. Using the food security index approach, the study revealed that 74% of the respondents were food secure while 26% were food insecure. The results of the logistic regression revealed that educational level were significant determinants of food security. Also, the major effect of food insecurity on the households include reduction in household income/ savings due to increased expenditure on food (M= 3.58), among others.

Owolade (2013) examined the determinants of food security among rural livestock farmers in south western Nigeria using primary data. They employed descriptive statistics and binormial regression in analysing the data collected. The study found that majority of the respondents were male and married. About 46% of them completed secondary education. They also found that a large proportion of them practice extensive system of livestock production.

Omotesho (2007) investigated food security and poverty in kwara state using discriminant analysis. Their studies revealed that accessibility to health facilities, household size, farm size and household expenditure on food were the major determinants of food security status. Non-farm income was a major determinants of household being non poor.

Arene & Anyaeji (2010) examined determinants of food security among households in Nsukka metropolis of Enugu State, Nigeria. It was found that about 60 per cent of the households are food insecure, using expenditure method of estimating food security status. Further analysis using the binary logistic regression method identified income and age of household head as important determinants of food security.

Abdullahi (2015) examined the determinants of food security status among rural Farm households in Kaduna State, Nigeria using logistic regression model to analyse the data collected through interview guide administered to 120 respondents. It was revealed that four out of the seven variables included in the model were significant. The determinants of food security in the study area were age, extension contact, source of labour and per capita income of the respondents.

Omotesho (2006) investigated the determinants of food security among the rural farming household in Kwara state, Nigeria using primary data conducted on 165 farmers. They employed the use of logistic regression model and descriptive statistics for their analysis. The study showed that about one third of the rural farming households sampled were food insecure and that farm size of the household, gross farm income, total non-farm income and household size are the significant determinants of rural household food security in the study area.

With primary data collected from survey of clients of non-profit food assistance agencies in selected southern states Onianwa & Wheelock (2006) examined the analysis of the determinants of food insecurity with severe hunger. They employed two stage process involving the application of the Rasch measurement scale and the logit model as the estimation technique. The result revealed that for both household with children and household without children, income was a significant predictor of food insecurity with severe hunger.

Abdulla (2015) Omotesho (2008) investigated the determinants of food security among the rural farming household in Kwara state, Nigeria They conducted questionnaire on 140 households and used descriptive statistics such as mean, standard deviation, percentages,

frequencies, ANOVA and chi square to analyse the data and ordered logit regression model. The survey result shows that about 23% of sampled farmers were food secured.

Sultan & Adiqa (2011) carried out a study on the determinants of food security at household level in Pakistan using Logistic regression procedure. The analysis found that place of residence, educational attainment level of household heads and dependency ratio has significant impact on food security while social capital and employment do not affect food security significantly.

Asmamau, Budusa and Teshager et al (2015) analysed the vulnerability to food insecurity among households in three different agro-ecological zones within the rural districts of Sayint in South Wollo, Ethiopia. The study employed depth and severity of food insecurity measurements adopted from poverty gap measurement approaches. Findings indicates that oxen ownership, livestock ownership and access to off-farm employment opportunities are the most significant determinants of a household's vulnerability to food insecurity.

3.0 METHODOLOGY

3.1 Data Collection

The data used for the work is primary data. Questionnaire were administered to respondents (the targeted audience), which is the rural household of Dekina Local Government Area. The sample of this study is made up of one hundred and twenty (120) households from three (3) communities. Since Dekina is a very large LG.A, it will be difficult to cover the whole L.G.A within the stipulated time frame of this study and that led to the choice of the three (3) major communities representing the three (3) districts of the L.G.A. Anyigba represent Okura District, Dekina represent Dekina District, while Abocho will be used for Biraidu District. Forty (40) questionnaires were administered to forty (40) respondents in each of the three (3) communities giving each of the area equal participation and the respondents shall be randomly selected.

The sampling technique used for the study was the random sampling. This was because the whole population has equal chance of being faced with food insecurity. The selection was done at random by selecting some household not minding the difference in their socio-economic characteristics. To ensure appropriate findings, the instrument used for data collection was structured questionnaire which were administered to households. Information were collected on age, occupation and sex of household head as well as other

household characteristics including monthly income, household composition, dependency ratio (number of non-working members divided by the number of working household members).

3.2 The Model

This work adopts the work of adapted the works of omonona et al (2007) and omotesho et al (2007)

The cumulative logistic probability model can be economically specified as;

$$Pi = F(Zi) = \frac{1}{1 + e^{-Z1}} \quad \dots\dots\dots\dots\dots\dots(i)$$

Where $Zi = Pi + P_2 Xi$

Therefore, $Pi = f(Zi) = \dfrac{1}{1 + e^{-(\beta_1 + \Sigma\beta_1 Xi)}}$

Where Pi is the probability that an individual is being food secure given Xi

Xi represents the ith explanatory variables

β_1 and β_2 are regression parameters to be estimated

e is the base of the natural logarithm

For ease of interpretation of the coefficients, a logistic model could be written in terms of the odds and log of odd. The odds ratio is the ratio of the probability that an individual or household would be food secure (Pi) to the probability of a household would not be food secure $(1 - P_1)$. That is

$$\left\{ \frac{Pi}{1 - Pi} \right\} = e^{Zi} \dots\dots\dots(3)$$

If we take the natural logarithm of equation (3), we obtain

$$\left\{ \frac{Pi}{1 - Pi} \right\} = Zi, = \beta_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 \dots + \beta_n X_n$$

if the disturbance term Ui is taken into account, the logit model becomes

$$Zi = \beta_1 + \underline{\Sigma}^n \beta_1 X_1 + Ui$$

$$I=1$$

Where the explanatory variables (Xi) are as follows: X_1 = Sex (SEX), X_2 = Educational attainment of the respondents (EDUATT), X_3 = Employment status (EMPSTAT), X_4 = Dependency ratio (DEPR), X_5 = Household income (HHINC), ,X_6 = Household food expenditure (HHFDEXPP), X_7= Household farm size (FARMSZ), X_8 = Age (AGE), X_9 = Family size (FAMILYSZ), X_{10} = Ownership of assets (OWNASS), X_{11}= marital status (MARSTA)

3.3 Variable Construction

In order to find the determinants of food security at household level in Dekina L.G.A, we used food security as dependent variable and income of the household, dependency ratio, employment status, educational attainment of household, social capital, family size, farm size, household expenditure per person as explanatory variables.

Dependent Variable

➢ **Food Security Index:** The household will be classified into food secure and food insecure households using food security index. This will be used to establish the food security status of various households given by; fi = Per capital food expenditure for the ith householdmean per capita food expenditure of all households. Where Fi = Food security index. When fi ≥ = Food secure ith household, Fi ≤ = Food insecure ith household

A food secure household is that whose per capita monthly food expenditure fall above or equal to the mean per capita food expenditure of the total households, and will be assigned the value of "1" and if "0" otherwise.

Independent Variables

➢ **Household Income:** Household income is measured by taking sum of income of all residents in each household.

➢ **Dependency Ratio:** Defined as the ratio of the non-earning (young and the aged)

persons of the family to the working members of the household. It is expected to decrease the probability of food security of the household.

➢ **Social Capital:** Measured by taking into account the payments received by a household in form of cash from relatives, non-relatives, non-governmental organization (NGOs) and trusts in case of emergencies. This variable takes the form of a dummy variable. Household that received payment will be assigned the value of 1 and 0 otherwise.

➢ **Educational Attainment Level of Head of the Household:** It will be divided in two categories and was assigned the value of "1" for primary, secondary and adult literacy education and the value of "2" for tertiary education (ND, NCE, B.Sc etc.) and "0" for illiterates.

➢ **Employment Status:** We divided employment into paid employee (non-agric), self-employed (non-agric), self-employed (agric) and unpaid family workers. We also used the dummy variables for employment status assigning value "1" for paid employee (agric), "2" for self-employed (non-agric), "3" for self-employed (agric) and "0 unpaid family workers.

Others are family size and age of household, ownership of assets.

3.4 Data Analysis

There are many statistical modes which can be used to establish the relationship between our dependent variable (food security) and the independent variables (household characteristics). Since the dependent variable is dichotomous and the use of probit and logit models is recommended for use (Gujarati, 2003).

Since the two are similar and most applicable, it is difficult to choose between logit and probit. The only reason why many researchers tend to choose logit over the probit is due to its simplicity in interpretation. Therefore, this study employs the logit model following the footstep of these researchers. That is, it is a binary variable which will take a value "1" if a household is food secure, zero (0) otherwise. Thus, this work shall employ the use of descriptive statistics such as tables, percentages, measures of central tendency and the Logit model for analyzing the data.

4.0 DATA ANALYSIS AND RESULT PRESENTATION

Out of the 120 questionnaires distributed, one hundred and ten (110) were returned and analyzed.

4.1 Level of Food Security

Table 4.1 Level of Food Security

Food Security	Frequency	Percentages
1	42	38
0	68	62
total	110	100

Source: field survey, 2014

The table above shows the level of food security among the households in the study area. Households are grouped into food secure and food insecure based on their per capita food expenditure. The value of "1" is assigned to food secured household and "0" for the food insecure household. The food insecure line is defined as the mean per capita food expenditure of the total households studied. This is computed from the data obtained from the field survey. The households whose per capita expenditure fall below N231.88 are designated as food insecure while households whose mean per capita expenditure is equal to or greater than the mean per capita expenditure N231.88 are food secure.

About 38 percent of the household are food secured while 62 of percent the household studied are food insecure. This shows that majority of the households do not take the right quantity and quality of food and may not have access to it due to some factors like low income and inadequate infrastructural facilities.

4.2. Socio-economic Characteristics of the Respondents in the Study Area

4.2.1 Age of the Respondents

Table 4.2.1 Distribution of Respondents According to Age

Age	frequency	percentage
25-40	62	55
41-60	40	38
61and above	08	07
Total	110	100

Source: Field Survey, 2014

Table 4.2 above reveals that about 55% of the respondent's ages are between the age of 25-40 while 38% of the respondents fall between ages 41-60 and 07% are within the range of age 61 and above. In general, majority of the households heads fall within the age range of 25-60 years which is the active labour force of the country.

4.2.2 Sex of Household of the Respondents

Table 4.2.2 Distribution of Respondents According to Sex

Sex	frequency	Percentage
Male	87	79
Female	23	21
Total	110	100

Source: Field Survey, 2014

Table 4.3 above shows that 79% of the respondents are male while 21% of the respondents are female. From the data collected sex has no impact on food security because both the male and the female household heads exhibit both food secure and food insecure depending on their income level. Some households headed by women are food secured as the ones headed by men.

4.2.3 Marital Status of Respondents

Table 4.2.3 Distribution of Respondents According to Marital Status

Marital Status	frequency	percentage
Married	71	65
Single	39	35
Total	110	100

Source: Field Survey, 2014

From the analysis above, 65 percent of the respondents are married while 35 percent of the respondents are single. The married households tend to be more food secured than the unmarried households.

4.2.4 Employment Status of Respondents

Table 4.2.4 Distribution of Respondents According to Employment Status

Marital Status	frequency	Percentage
Paid employee (non agric)	74	66
Self Employed (non agric)	24	22
Self Employed (agric)	07	07
Unpaid family workers	05	05
Total	110	100

Source: Field Survey, 2014

Table 4.5 above shows the distribution of respondents according to employment status. A higher percentage (66%) of the respondents is paid employee while some are employed by the government others are involved in some casual jobs and they combine this with farming. A little percentage (7%) of the respondents is only involved in agriculture.

4.2.5 Educational Qualification of Respondents

Table 4.1.5 Distribution of Respondents According to Educational Qualification

Marital Status	frequency	Percentage
Primary, Secondary and Adult Education	46	42
Tertiary Education(NCE, ND, BSc etc)	54	49
Illiterate	10	09
Total	110	100

Source: Field Survey, 2014

The analysis above reveals that only 09 percent of the respondents have no level of education at all while 42 percent have either primary, secondary or adult education while 49 percent has tertiary education which may be NCE, ND, B.Sc. etc. This result shows that majority of the respondents have one level of education or the other but still food insecure which may be due to the high rate of unemployment in the country.

4.3   Presentation and Discussion of Regression Result

Table 4.3 Probit Model Result

Variable	Coefficient	Std. Error	z-Statistic	Prob.
HHFEXPP	0.022145	0.005809	3.812196	0.0001
HHINC	2.73E-05	1.40E-05	1.943250	0.0520
MARSTA	-0.822309	0.678733	-1.211536	0.2257
OWNASS	-0.352350	0.628890	-0.560272	0.5753
SEX	-1.697621	0.641130	-2.647857	0.0081
SOCCAP	0.817859	0.533056	1.534283	0.1250
FARMSZ	-0.513162	0.736238	-0.697006	0.4858
FAMILYSZ	-0.155216	0.159841	-0.971064	0.3315
EMPLSTA	-0.380665	0.440229	-0.864699	0.3872
EDUATT	-0.087161	0.487366	-0.178841	0.8581
DEPRAT	0.183030	0.364031	0.502786	0.6151
AGE	-0.088013	0.032338	-2.721651	0.0065

Mean dependent var	0.381818	S.D. dependent var	0.488056
S.E. of regression	0.257006	Akaike info criterion	0.568022
Sum squared resid	6.473126	Schwarz criterion	0.862620
Log likelihood	-19.24122	Hannan-Quinn criter.	0.687513
Avg. log likelihood	-0.174920		

Obs with Dep=0	68	Total obs	110
Obs with Dep=1	42		

The estimation in table 4.2.1 above depicts that household food expenditure per person (HHFDEXPP), household income (HHINC), sex (SEX), age (AGE) have statistically significant bearing on food security status of households at 5% confidence level. Other determinants such as household income (HHINC), marital status MARSTAT, ownership of assets (OWNASSET), social capital SOC, farm size, Family size employment status and dependency ratio (DEPR) are statistically insignificant.

Some determinants like household expenditure per person, household income, social capital, and depreciation ratio showed positive sign meaning that increase in any of these variables will lead to an increase in food security. Apart from dependency ratio all others are in conformity with a priori expectation. The more the household expenditure per person, household income, the more they are food secure, likewise households that have other means of income in form of donations from NGOs, gifts from relatives etc tend to be more food secured (social capital), the larger the farm size, the more food secured keeping other factors unchanged, the households.

On the other hand, marital status, ownership of assets, family size, farm size, educational attainment, employment status, age and sex has negative signs. Apart from family size and age, other variables are not in line with a priori expectation, it shows that households that are headed by female and single either divorced or widowed etc is as food secured as households headed by male and married men/women. The negative sign for the ownership of assets is an indication that household heads are subsistence farmers and may not value the need for assets such as storage facilities and mechanized tools. Educational attainment and employment status seem not to have bearing with food security in this area probably because most of the household heads are literate and have one job or the other. Age and family size has negative relationship showing that as one gets older the less food secured. Those within ages 31- 50 usually occupy higher position with corresponding high income while between the ages of 51-60, households are getting retired. At age 60 and above households are expected to be retired and their income will be reduced which will increase food security. The result shows that food security decreases by 0.155 as family size increases by one unit. Increase in family size has negative effect on food security.

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary of Findings

This work examined the determinants of food security among households in Dekina LGA of Kogi State. We employed the use of both descriptive statistics and logit model which is a binary model to analyze the data obtained from our field survey.The work has shown that about 62% of the households are food insecured meaning that majority of the households do not take the right quantity and quality of food and may not have access to it due to some factors like low income and inadequate infrastructural facilities.

Also, the socioeconomic characteristics of the respondents revealed that majority of the households heads fall within the age range of 25-60 years which is the active labour force of the country. Sex and marital status have no significant impact on food security. Majority of the household heads are in paid employee (non agric) and the literacy level is high.

The logit regression result revealed that household food expenditure per person, household income, sex and age have statistically significant bearing on food security status. Other determinants such as marital status, ownership of assets, social capital, farm size, Family size and employment status are statistically insignificant. It was also revealed that increase in some of the determinants like household expenditure per person, household income, social

capital, will lead to an increase in food security. On the other hand, marital status, ownership of assets, educational attainment, employment status, family size, farm size, age and sex has negative relationship with the dependent variable in the study area.

5.2 Recommendation

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

Since food security increases with increase in household income, expenditure per person, government should increase the wages and salaries of her employee which will have a strong impact on the household food security since they are mostly in paid employment. We specifically recommend that the federal and state government should ensure that the N18,000.00 minimum wage is implemented at the local government level since most of the residence are employed at this level.

We also recommend that government should create more employment opportunities, make funds available to individuals to enable them go into large scale farming. Also, government should subsidize inputs like fertilizer, tools and so on to make them affordable.

Finally, Government should make policies targeted at alleviating poverty of the populace by providing them with the necessary basic amenities.

5.3 Conclusions

In this study, we attempted to capture the socioeconomic factors on food security among rural households of Dekina LGA. The study identified a number of determinants that appear to be significant risk factors to food security. In particular, household income, expenditure per person, family size, social capital, stood out as the major determinants of food security. Further studies should be carried out in other parts of the State

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FORECASTING OF NIGERIA MANUFACTURING SECTOR GROWTH RATES USING ARIMA MODEL

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Abstract

The objective of this study is to identify a forecasting model that can predict Nigeria's future manufacturing sector growthrateand to ascertain whether policy makers could maintain a steady and sustainable growth rate in the manufacturing sector.The study employed Autoregressive Integrated Moving Average (ARIMA) on annual data from 1970 to 2014 on manufacturing production index (MPI) as a measure of manufacturing sector growth rate**.** The ARIMA model selected is the Autoregressive (AR) [ARIMA (1, 0, 0)]. That is, the AR1) model was selected as the most appropriate for forecasting model for manufacturing sector growth rates in Nigeria. The ARIMA model was selected on the basis of Autocorrelation (AC) and Partial Autocorrelation (PAC) Function and the inverse root of AR/MA polynomials for stability of the estimated model The forecasted values of manufacturing sector growth for 2015, 2016, 2017, 2018, 2019 and 2020 using Dynamic Forecast were 72.1%, 75.6%, 75.9%, 76.4%, 76.8% and 77.2% respectively. The major finding of this study is that Nigeria's manufacturing sector future growth rate is moving gradually with an average annual projected growth of approximately 90.8 %. The projected rate showed that Nigeria government needs to double her efforts in order to fructify its vision of becoming twenty largest economies in the world by 2020 and the 12th largest economy by 2050.

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1. INTRODUCTION

The Nigerian economy aspires to become one of the twenty largest economies in the world by 2020 and the 12th largest economy by 2050 (CBN, 2009). Indeed, it is the aim of Vision 20:2020 to transform the Nigerian economy into one of the largest in the world within the shortest possible time as well as achieving a sound, stable and globally competitive economy, with GDP of not less than US$900 billion and a per capita income of $4,000 per annum (CBN, 2009). One of the surest ways to achieve the afore-stated goals is to pursue a rapid and sustainable economic growth and development via industrialization. In the light of the great expectation from industrialization, manufacturing has been mostly favoured in the blueprint of various industrial policies that have been put in place so far in Nigeria. The manufacturing sector according to Egbon (1995) is the most favoured sector in the Nigerian economy, especially as the main instrument of rapid growth, structural change and self-sufficiency and that industrial policies are geared towards improving the economic performance of individual agents, firms and industries on the supply side of the economy. However, in the face of these policies, the performance of the manufacturing sector has not been impressive.

For example, the Nigerian manufacturing industry grew quite rapidly during the 1974-80 period that coincided with the country's oil boom. During this period, manufacturing value added recorded an annual average growth rate of about 12 percent. At the end of the oil boom, however, the sharp fall in domestic demand (resulting from a sharp decline in aggregate income) and drastic reduction in the country's import capacity had a direct and significant impact on the manufacturing sector. One indicator of this effect is the rapid decline of capacity utilization of the manufacturing sector from a peak of 76.6 percent in 1975 to 43.8 percent in 1989. The capacity utilization of the manufacturing industry further dwindled in the 1990s and ranged between 40.3 per cent and 34.6 per cent; while 36.1 and 54.8 percent were recorded in 2000 and 2005, respectively. The improved performance in the manufacturing sector during these periods was attributed to a number of factors; which included the relative macroeconomic stability and the regular supply of petroleum products. The capacity utilization of the manufacturing industry further

dwindled to 53.3 percent in 2006. A brief spike in manufacturing capacity utilization was observed in 2010 as capacity utilization increased to 56.79 percent before peaking at 60.3% in 2014. The improved performance of this sector during this period could be linked to improved availability of inputs as a result of increased inflow of foreign exchange.In addition, the share of manufacturing in the economy's aggregate output remains stuck at the very low levels. For example, manufacturing industry share in gross domestic product, which stood at 7.2 percent in 1970 fell to 5.2 per cent in 1975 before rising gradually to 11.2 percent in 1982. Following the depressing state of the economy in the 1980s, manufacturing share in GDP fell and remained in the range of between 7.8 percent and 8.4 percent. With the fluctuating growth in manufacturing production since 1992, the contribution of the sector to the GDP fell from 8.3 to 3.4 percent between 1993 and 2001. Between 2002 and 2007, manufacturing share in the GDP witnessed only a marginal increase of 3.0 percent (CBN Annual Report, Various Issues). A decline was again recorded in 2008 and 2009 but recorded a consistently upward trend of 7% in 2010 to 10 percent in 2014 and marginal rate of 9.5% in 2017 (ERGP,2017). These provided strong indices that manufacturing industry in Nigeria has been dwindling, hence the need for the present study to forecast manufacturing sector growth rates in Nigeria.

Forecasting or projecting into the future will give a clearer picture of how the state of the economy is likely to perform and also inform policy makers on whether they are progressing or not and how they need to fine-tune their efforts, the quantum of resources to be mobilized and allocated efficiently and whether they can sustain a steady and increasing manufacturing sector growth. Sustained growth in the manufacturing sector will guarantee the country's vision of becoming one of the twenty largest economies in the world by 2020 and the 12th largest economy by 2050. This precisely is the general thrust or focus of this research work. It is indeed to all intent and purpose, the overriding motivation for the study.

2. REVIEW OF RELATED LITERATURE

Samad, Ali & Hossain (2002) applied the Box-Jenkins (ARIMA) methodology to forecast wheat and wheat flour prices in Bangladesh. They concluded that the ARIMA forecasts were satisfactory during and beyond the estimation period and could be used for policy purposes as far as price forecasts of the commodities were concerned.

Valle (2002) used ARIMA and VAR models to forecast inflation in Guatemala. The results showed that ARIMA produced good results and the forecasts behaved according to the underlying assumptions of each model.

Katimon & Demun (2004) applied the ARIMA model to represent water use behaviour at the Universiti Teknologi Malaysia (UTM) campus. Using autocorrelation function (ACF), partial autocorrelation function (PACF), and Akaike's Information Criterion (AIC), they concluded that ARIMA model provides a reasonable forecasting tool for campus water use.

El-Mefleh & Shotar (2008) applied the Box-Jenkins (ARIMA) methodology to the Qatari economic data. They concluded that ARIMA models were modestly successful in ex-post forecasting for most of the key Qatari economic variables. The forecasting inaccuracy increased the farther away the forecast was from the used data, which is consistent with the expectation of ARIMA models.

Adebiyi, Adenuga, Abeng, Omamukue & Ononugo (2010) examined the different types of inflation forecasting models covering ARIMA, VAR, and VECM models. The empirical results from ARIMA showed that ARIMA models were modestly successful in explain inflation dynamics in Nigeria.

Baffigi, Golinelli and Parigi (2004), predicted the growth rate of GDP in Germany, France, Italy and Europe region using the Bridge Model (BM) and other basic models such as ARMA, VAR and a structural model. They concluded that the Bridge Model (BM) outperformed all other techniques used in their study.

A more recent submission by Sarbijan (2014) showed that the Markov switching model could better forecast Iran's economic growth than ARIMA models.

Gil-Alana (2001) showed that a Bloomfield exponential spectral model gave a feasible result, in lieu of ARMA models, for UK's unemployment rate.

Golan and Perloff (2002) concluded that nonparametric methods of forecasting unemployment rates in the U.S outperformed other models.

Floros (2005) compared the out-of-sample forecast accuracy for the United Kingdom unemployment rate and established that, though an MA(4) model performed well, the MA(4)-ARCH (1) model provided superior forecasts.

Zhou He and Sun (2006) showed that the ARIMA/GARCH model outperformed the

Fractional Autoregressive Integrated Moving Average (FARIMA) 3 for predicting telecommunication network.

Assis, Amran and Remali (2010) have also demonstrated the superiority of the mixed ARIMA/GARCH model over the exponential smoothing, ARIMA, and GARCH models in forecasting future prices of cocoa beans in Malaysia.

Similarly, Kamil and Noor (2006) concluded that the mix ARIMA/GARCH model outperformed the Autoregressive Conditional Heteroskedasticity (ARCH) model when used to forecast the price of raw palm oil in Malaysia.

3. Theoretical Framework and Methodology

The Box-Jenkins (1976) methodology refers to the set of procedure for identifying, fitting, and checking autoregressive integrated moving average (ARIMA) models with time series data (Hanke & Wichern, 2005; Roberts, 2006). Forecasts follow directly from the form of the fitted model. ARIMA methodology is not embedded within any underlying economic theory or structural relationship, and the forecasts from the models are based purely on the past behaviour and previous error terms of the series of interest (Hanke & Wichern, 2005; Roberts, 2006).

The Box-Jenkins (ARIMA) econometric modelling is a forecasting technique that completely ignores independent variables in making forecast. It takes into account historical data and decomposes it into *Autoregressive* (AR) process, where there is a memory of past events; an *Integrated* (I) process, which accounts for stabilizing or making the data stationary, making it easier to forecast; and a *Moving Average* (MA) of the forecast errors, such that the longer the historical data, the more accurate the forecasts will be, as it learns over time. ARIMA models therefore have three model parameters, one for the AR(p) process, one for the I(d) process, and one for the MA(q) process, all combined and interacting among each other and recomposed into the ARIMA (p,d,q) model. The ARIMA models are applicable only to a stationary data series, where the mean, the variance, and the autocorrelation function remain constant through time. The only kind of nonstationarity supported by ARIMA model is simple differencing of degree d. In practice, one or two levels of differencing are often enough to reduce a nonstationary time series to apparent stationarity (Hanke & Wichern, 2005; Roberts, 2006).

Any forecasting technique that ignores independent variables also essentially ignores all potential underlying theories except those that hypothesize repeating

patterns in the variable under study. Since the advantages of developing theoretical underpinnings of a particular equation before estimating them have been emphasized in regression theory, why would we advocate ARIMA? The answer is that the use of ARIMA is appropriate when little or nothing is known about the dependent variable being forecasted or when all that is needed is one or two-period forecast (Hanke & Wichern, 2005; Roberts, 2006).

The Box-Jenkins methodology begins with an ARMA (p,q) model which combines both the AR and MA models as follows:

$$Y_t = \gamma \chi_t + e_t \qquad\qquad 1$$

$$e_t = \sum_{i=1}^{p} \alpha_i y_{t-i} + \sum_{j}^{q} \beta_j \varepsilon_{t-j} + \mu_t \qquad\qquad 2$$

Where, χ_t represents the explanatory variables, e_t is the disturbance term. In equation (2), y_{t-i} are AR terms of order p, μ_t is a white-noise innovation term. In case of a non-stationary data, the series is differenced (integrated) such that: $\Delta^d Y_t = (1-B)^d y_t$ (d is the number of times a series is differenced to become stationary; I=d) then the ARMA (p, q) model becomes ARIMA(p,d,q) models (Auto- regressive Integrated Moving Average of order p, q). The Box – Jenkins model building techniques consist of the following four steps:

1. Preliminary Transformation: if the data display characteristics violating the stationarity assumption, then it may be necessary to make a transformation so as to produce a series compatible with the assumption of stationarity. After appropriate transformation, if the sample autocorrelation function appears to be non-stationary, differencing may be carried out.

2. Identification: if $\{yt\}$ is the stationary series obtained in step 1, the problem at the identification stage is to find the most satisfactory ARIMA (p,q) model to represent $\{yt\}$. Box – Jenkins (1976) determined the integer parameters (p,q) that governs the underlying process $\{yt\}$ by examining the autocorrelations function (ACF) and partial autocorrelations (PACF) of the stationary series, $\{yt\}$. This step is not without some difficulties and involves a lot of subjectivity; hence it is useful to entertain more than one structure for further analysis. Salau (1998) stated that this decision can be justified on the ground that the objective of the identification phase is not to rigidly select a single correct model but to narrow down the choice of possible models that will then be subjected to further examination.

3. Estimation of the model: This deal with estimation of the tentative ARIMA model identified in step 2. The estimation of the model parameters can be done by the conditional least squares and maximum likelihood.

4. Diagnostic checking: Having chosen a particular ARIMA model, and having estimated its parameters, the adequacy of the model is checked by analyzing the residuals. If the residuals are white noise; we accept the model, else we go to step 1 again and start over.

In recent years, forecasters have applied alternative approaches (Multiple Regression Models and the Box-Jenkins' Autoregressive Integrated Moving Average (ARIMA) Model) to forecast future values, owing to the fact that the traditional methods of forecasting are generally rigorous and time consuming, and also they require a laborious iterative approach.

The regression method has appeared in contemporary motivating literature: (Syariza and Noorhafiza, 2005; Taylor, 2008; Javadadi and Suhartono, 2010) etc. However, the major setback of the regression approach reposes on the severity of its underlying assumptions, thereby paving way for the Box-Jenkins methodology being extensively used in recent times (Floros, 2005; Kamil, and Noor, 2006; Purna, 2012). Two important assumptions of regression analysis that pose a threat to model building and forecasting are: independence of residuals (*No Autocorrelation*) and constant variance of residuals (*Homoscedasticity*). Violation of these two assumptions may make the regression estimates meaningless (Nanda, 1988; Greene, 2003; Bourbonnais, 2004 and Gujarati, 2004). Another key assumption of regression analysis is the independence of explanatory variables (*Multicollinearity*) and its violation which leads to a singular matrix (*Determinant Equals to Zero*) thus, making it impossible to obtain regression estimates.

For the sake of forecasting, the Box-Jenkins' method is considered to be superior as it directly takes into consideration the problem of autocorrelation. Hence, the study made use of ARIMA model. The ARIMA model combines both the moving average (MA) and the autoregressive (AR) models. ARIMA has the potential to provide short-term forecasts that are superior to more theoretically satisfying regression models. ARIMA modelling advocates that there is correlation between a time series data and its own lagged data.

Other econometric models have proven their predictive power over ARIMA models. Baffigi, Golinelli and Parigi (2004), predicted the growth rate of GDP in Germany,

France, Italy and Europe region using the Bridge Model (BM) and other basic models such as ARMA, VAR and a structural model. They concluded that the Bridge Model (BM) outperformed all other techniques used in their study. A more recent submission by Sarbijan (2014) shows that the Markov switching model could better forecast Iran's economic growth than ARIMA models.

4. RESULTS AND DISCUSSION

The ARIMA modelling strategy discussed under materials and methods is applied to analyze the data on manufacturing sector growth measured by manufacturing production index (MPI). The summary of the estimated ARMA model in equation 2 is presented in table 1. The ARIMA test was conducted using Eviews 9.5 econometric soft ware. The ARIMA model selected is the Autoregressive (AR) [ARIMA (1, 0, 0)]. That is, the $AR_{(1)}$ model was selected as the most appropriate for forecasting model for manufacturing sector growth in Nigeria (see Appendix on Autocorrelation (AC) and Partial Autocorrelation (PAC) Function and the inverse root of AR/MA polynomials for stability of the estimated model). The estimated $AR_{(1)}$ model is presented as follows:

Table 1: Estimated ARIMA (1, 0, 0)

Variable	Coefficient	Std. Error	t-Statistic	Prob
Dependent Variable: LOG(MPI)				
C	87.80755	46.60916	1.883912	0.0667
AR(1)	0.965106	0.055535	17.37848	0.0000
Inverted AR Roots	.97			

Source: Researcher's Computations (2017)

ARIMA model above cannot be interpreted as in OLS because the construction of ARIMA model is not based on any economic theory. It is often best not to ever interpret the individual parameter estimates, but rather to examine the plausibility of the model as a whole and to determine whether it describes the data well and produces accurate forecast (Brooks, 2008). Test of accuracy of the estimated model was conducted using the Autocorrelation (AC) and Partial Autocorrelation (PAC) Function and the inverse root of AR/MA polynomials for stability of the estimated model (see Brooks, 2008; Gujarati, 2009). The results of both tests are presented in Appendix I. The AC and PAC express a systematic strikes pattern and none of the AC and PAC is individually statistically significant. In other words, the correlograms of both autocorrelation and partial autocorrelation give the impression that the residuals

estimated from table are purely random.

To support the conclusion from Autocorrelation (AC) and Partial Autocorrelation (PAC) Function, the test for stability or stationarity of the series using the inverse root of AR/MA polynomials for stability was employed. The result presented in Figure 1 in Appendix I showed that the series is stable. This is because the entire characteristic roots lies within the circle. From the Autocorrelation (AC) and Partial Autocorrelation (PAC) Function and inverse root of AR/MA polynomials for stability, there may not be any need to look for another ARIMA model. Therefore, the AR(1) model estimated in table 1 is reliable for forecasting manufacturing sector growth in Nigeria.

To obtain the forecast of LOG (MPI) level rather than its changes, we undo the first difference transformation that we had used to obtain the changes. This study employed the dynamic forecast to forecast manufacturing sector growth up to 2020.

$$AR(q): LOG(MPI) = 87.80755 + 0.9651060 \qquad (3)$$

The forecasted values of manufacturing sector growth for 2015, 2016, 2017, 2018,2019 and 2020 by Dynamic Forecast using Eviews 9.5 is given as 72.1%, 75.6%, 75.9%, 76.4%, 76.8% and 77.2% respectively. Taken the forecast into consideration (2015, 2016, 2017, 2018, 2019 and 2020) we can deduce that the MPI also increased gradually through the period that was considered. By implication, the null hypothesis of decreasing trend is rejected and the alternative of hypothesis of increasing trend accepted. In summary, the ARIMA model revealed that manufacturing production index (MPI) in Nigeria appear with increasing trend. This is an indication that the manufacturing sector still remains major source of hope for sustainable growth and development in Nigeria.

5. CONCLUSION

The principal aim of modelling is to capture underlying phenomenon using the observed time series in order to predict the likely realization of future values (Nkwatoh, 2012). In recent years, forecasters have applied alternative approaches (Multiple Regression Models and the Box-Jenkins' Autoregressive Integrated Moving Average (ARIMA) Model) to forecast future values, owing to the fact that the traditional methods of forecasting are generally rigorous and time consuming, and also they require a laborious iterative approach. The Box-Jenkins' method is considered to be superior as it directly takes into consideration the problem of

autocorrelation (Nanda, 1988). ARIMA has the potential to provide short-term forecasts that are superior to more theoretically satisfying regression models. ARIMA modelling advocates that there is correlation between a time series data and its own lagged data. Hence, the study made use of ARIMA model to forecast the growth of the manufacturing sector.

Manufacturing sector growth rates in Nigeria measured by manufacturing production index (MPI) have been shown to follow Autoregressive (AR) [ARIMA (1, 0, 0)]. That is, the AR(1) model was selected as the most appropriate for forecasting model for manufacturing sector growth in Nigeria. The ARIMA model was selected on the basis of Autocorrelation (AC) and Partial Autocorrelation (PAC) Function and the inverse root of AR/MA polynomials for stability of the estimated model Also, the model has been used to make forecasts for future values, which appeared with increasing trend. The major finding of this study is that Nigeria's manufacturing sector future growth rate is moving gradually with an average annual projected growth of approximately 90.8 %. This is an indication that the manufacturing sector still remains major source of hope for sustainable growth in Nigeria.

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Appendix I: ARIMA MODEL Test Results

Dependent Variable: MPI
Method: ARMA Generalized Least Squares (Gauss-Newton)
Date: 08/16/17   Time: 17:52
Sample: 1972 2014
Included observations: 43
Convergence achieved after 28 iterations
Coefficient covariance computed using outer product of gradients
d.f. adjustment for standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	87.80755	46.60916	1.883912	0.0667
AR(1)	0.965106	0.055535	17.37848	0.0000

R-squared	0.845042	Mean dependent var	111.5647
Adjusted R-squared	0.841262	S.D. dependent var	37.95428
S.E. of regression	15.12172	Akaike info criterion	8.377859
Sum squared resid	9375.322	Schwarz criterion	8.459776
Log likelihood	-178.1240	Hannan-Quinn criter.	8.408068
F-statistic	223.5870	Durbin-Watson stat	1.751673
Prob(F-statistic)	0.000000		

Inverted AR Roots	.97

Forecasted Values

Period	Forecast
2015	**72.12789**
2016	**75.57034**
2017	**75.99735**
2018	**76.40945**
2019	**76.80718**
2020	**77.19103**
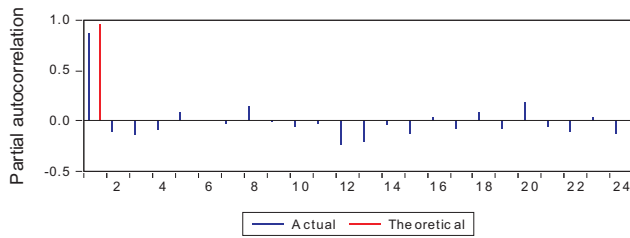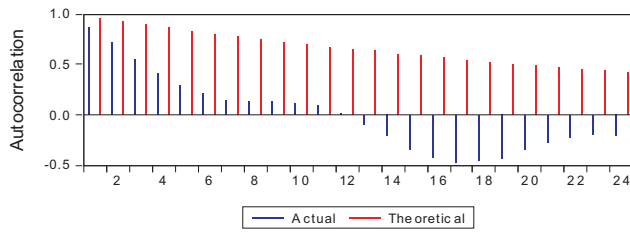
Figure 1: Inverse root of AR/MA polynomials for stability
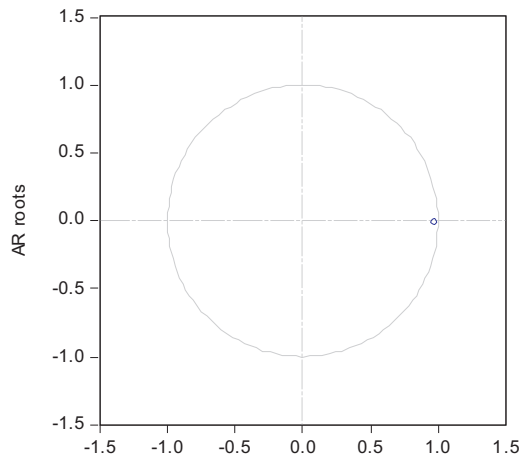
CHALLENGES OF HUMAN CAPITAL FORMATION IN NIGERIA: A DISCRIPTIVE ANALYSIS

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Abstract

This paper examines the trends and challenges of human capital formation process in Nigeria from 1981 to 2016. In achieving these objectives, the paper adopts a descriptive statistical method such as ratios, percentages, standard deviation, skewness, kurtosis analysis among others. Our results show that the funding of the education and health sectors fell far short of the 15% and 26% of annual budget for education and health sectors recommended for developing countries by the Abuja 2001 declaration, and UNESCO respectively. For example, in the case of education sector in Nigeria, it has been mostly less than 8% and less than 5% of annual budget allocated to the health sector in our review period. Thus the poor funding (especially the capital expenditure funding of both sectors) has resulted in brain drain, medical tourism as well as education tourism, further blighting the human capital formation process in Nigeria. This results in huge foreign exchange loss where about $1billion dollar (N400b) are lost annually to medical tourism, and about N1trillion is also lost to education tourism in Nigeria. This work found that a lot of challenges such as abysmal funding and curtailing the huge exodus of education and other health experts to other countries were basically responsible for poor human capital formation in Nigeria. Some recommendations including proper funding, and policy streamlines where proffered to encourage innovation and motivation in other to sanitize the two sectors to enhance economic growth and human capital utilization in Nigeria.

Keywords: Human Capital, Education Tourism, Medical Tourism, Brain Drain

1. INTRODUCTION

Hitherto, the concept of human development was not given the needed international attention until the economic crisis that preceded the 1990s brought to the fore the publication of the first Human Development Reports by the United Nation's Development Programme in 1990. However, the importance of human capital in the growth process of developing countries has always been recognized by policy makers as a major factor used in converting all resources for the benefit and use of mankind (Habison, 1973).

Beyond all of that, is a realization of the fact that the greatest assets of a nation which can actually stand scrutiny of economic development history are not necessarily crude oil, gold, diamonds, uranium and the likes, but the depth of human capital a country can draw from her quest for development. The skills, knowledge, and innovation that people accumulate are the greatest assets of economies on the rise. Recent evidence shows that human capital explains up to two thirds of income differences across the world. This is profoundly important for Africa today (Hansen, Matiang'i, & Ziob, 2017).

Human capital formation and usage has enhanced economic growth across the world, hence, some scholars have emphasized the importance of human capital on economic growth (Abramovitz, 1981; Romer, 1986; Lucas, 1988; & Adelakun, 2011). Human has actually been described as an end or objective of development. According to Otu and Adenuga (2006), it is a way to fulfill the potentials of people by enlarging their capabilities, and this necessarily implies empowerment of people, enabling them to participate actively in their own development. The late Prime Minister of Singapore Lew Kuan Yew once stated that *trained talent is the yeast that transforms a society and makes it rise*.

Bannock, Baxter & Rees (1985) describe human capital as the skills, capabilities and abilities possessed by an individual which permits him to earn income. They regard income a person derives from supplying personal services as the return on the human capital he possesses. On the other hand, Black (2003) sees human capital as the present discounted value of the additional productivity, over and above the product of unskilled labour, of people with skills and qualifications. In enhancing human capital formation, two areas are very important among others viz; Education and Health sectors (Thirlwall, 1999). The federal government has often realized the role they play in enhancing economic growth in Nigeria; hence the allowance accorded them (health and education) in the concurrent list among items in the nation's

constitution (Nigeria's Constitution, 1999). Despite these efforts, human capital development and usage in Nigeria is still very abysmal.

Every year, Nigerians are inundated with rituals of budget speech by the president and various states governors outlining their development plans for the fiscal year as it relates to their areas of operations. However, though money seems to be earmarked to enhance human capital formation, it often falls short of world standards (for education, UNESCO recommended 26% of total budget while for health, WHO recommended 15% of GDP). The emphasis on education through knowledge acquisition, training and information system stems from the fact that they have become increasingly critical to growth, as scientific and engineering findings proliferate and take on ever greater importance in production of goods and services. As information grows exponentially, and its incorporation in production process becomes increasingly complex, the ability to acquire, and adapt new knowledge will be an important determinant of economic growth (World Bank, 1997). Despite all the purported amount spent by Nigeria and all of Africa in the expansion of schools' enrollment leading to rapid accumulation of human capital, and the absence of a growth response to this educational miracle, pointed Pinchett (1997) to ask *where has all the education gone?*

In addition to the above, it is pertinent to include the fact that human capital formation can also be enhanced in the form of Health. Health is central to well-being of an individual and enhances his productivity. This can be manifested through good health, excellent sanitation or improvement in environmental conditions, promoting the development of comprehensive health services, prevention and controlling communicable diseases as well as developing health manpower among others (Thirl-wall, 1999). These two keys areas are the fulcrums of our work in discussing human capital formation review giving the conclusion from Schultz (1961) that identified five areas of human resources development which are:

i.   Investment in health facilities and services, broadly conceived to include all expenditures that affect life expectancy, strength and stamina and the vigour and vitality of the people.

ii.   On-the-job training, including old-typed apprenticeships organized by firms.

iii. Formally organized education at the elementary, secondary and higher levels.

iv.   Study programmes for adults that are organized by firms including extension programmes notably in farms and

v.   Migration of individuals and families to adjust to changing job opportunities.

In the 2004 Human Development Index Report which relies on indices of economic performance indicators such as GDP, GNP, and per capita income, life expectancy, literacy, water, nutrition and sanitation status, health risks, and technology diffusion and use, ranked Nigeria 151 among 177 countries rated. However, countries like Malaysia, Thailand, Tunisia, South Africa, and Ghana were rated 59, 76, 92, 119, and 131 respectively (Aluko, 2015). Based on this abysmal performance of human capital formation and usage in Nigeria, this study tries to analyze the trend in funding the two key sectors of education and health in Nigeria with a view to understanding and unraveling the reasons for this poor performance.

1.1 Objectives of the Study

The main objective of this study is to ascertain the process and usage of human capital formation in Nigeria; and the specific objectives are to:

i.   Analyze the trends in Federal Government funding of the two key areas or sectors critical to human capital formation in Nigeria viz; education and health;

ii.   Highlight some of the challenges facing human capital formation process and usage in Nigeria.

2. LITERATURE REVIEW

2.1 Conceptual Literature

Basically, human development is enhanced through the process of human capital formation and usage. Bammock, et al. (1985) describe human capital as the skills, natural capabilities and abilities possessed by an individual which permits him to earn income. They regard income a person derives from supplying personal services as the return on the human capital he possesses. On the other hand, Black (2003) sees human capital as the present discounted value of the additional productivity over and above the product of unskilled labour of people with skills and qualifications. Essentially, any activity according to McConnel, Bruce & Macphersen (2010) that increases the quality (productivity) of labour may be considered an investment in

human capital. Human capital is therefore associated with investment in man and his creative productive resource.

There are two sides to human development enhanced through human capital formation. The first is the formation of human capabilities, which includes health, knowledge, skills and general wellbeing. The second is the use of which people put their acquired capabilities. This implies investment in people for productive purposes that contribute to growth and employment, for active participation in cultural, political and social affairs (Arimah, 2001).

The concept (human capital) refers to activities and skills of the human resources of the country while human capital for a nation refers to the process of acquiring and increasing the number of persons who have the skills, education and experience which are critical for the economic and political development of the country.

Theoretical Literature

The human capital theory as explained by Adelakun (2011) is one that shows how education leads to increase in productivity and efficiency of workers by increasing the level of their cognitive skills. He further stated that Theodore, Schultz, Gory, Bucker and Jacob Mincer introduced the notion that people invest in education so as to increase their stock of human capabilities which can be formed by combining innate abilities with investment in human beings (Babalola, 2010). Examples of such investment include expenditure on education, on-the-job training, health and nutrition-these have been recurring in the literature. The provision of education is seen as a productive investment in human capital which is considered to be equally or even more worthwhile than that of physical capital.

However, in the theoretical literature, Romer (1986) and Lucas (1988) have in recent times past pioneered the human capital growth framework in their endogenous growth theories. They were of the view that in the long-run, output per unit of input could increase even when input has been accounted for. Technically, advanced human capital and a growing knowledge base were important contributors of this growth. The endogenous growth model as pioneered by Robert Lucas and Paul Romer assumed that there are positive externalities associated with human capital formation (for example, education and training) and research and development that prevent the marginal product of capital from falling and the capital-output ratio from rising. We have a production function in capital of:

$$Y = AK^{\alpha} \quad \text{------------------- (1)}$$

Where $\alpha = 1$. Indeed, it can be seen from the expression of the capital-output ratio. i.e.

$$\frac{K}{Y} = \frac{K}{L} \cdot \frac{L}{Y} \text{----------------} (2)$$

that anything that raises the productivity of labour $(\frac{Y}{L})$ in the same proportion as $(\frac{K}{L})$

will keep the capital-output ratio constant. Learning by doing and embodied technical progress in the spirit of Arrow and Kaldor as well as technological spill overs from trade are additional possibilities to education and research and development (Thirwall, 1999).

In summary, the endogenous growth model discards;

   i.   The diminishing marginal returns to capital investment.

   ii. Permits increasing returns to scale in aggregate production.

   iii. Focus on externalities in determining the rate of returns on capital investment

   iv. Focus on private and public investment in human capital.

The conclusion is that the high rate of returns on investment offered by the developing countries with low capital-output ratio are greatly eroded by lower levels of complementary investment in human capital (education), infrastructure or research and development (R and D).

The endogenous growth models view human capital as an input to the production function and predict that the growth rate is positively related to the stock of education. The accumulation of human capital involves a sacrifice of current utility in the form of less current consumption, in the case of education, or a less desirable mix of current consumption goods when on-the-job training is considered.

2.3 Empirical Literature Review

Human resources constitute the ultimate basis for the wealth of nations, capital and natural resources are passive factors of production. Human beings are the active agents who accumulate capital, exploit natural resources, build social, economic and political organizations, and carry forward national development. Clearly a country which is unable to develop the skills and knowledge of its people and to utilize them effectively in the natural economy will be unable to develop anything else (Habison, 1973). Ngustav (2005) citing Ojo et al. (1997) opined that of all the contributing

factors to economic development, human resources stand out as the major factor that determines the manner in which all other factors should be combined and the spur of the developmental process.

The human element in economic development is such that it must be highly skilled, must have ability to search, discover, and mobilize the result for the development of a nation's natural resources (Okoh, 2002).

According to Iheriohanma & Ukachukwu (2014) globalization and its impact on production, has caused many unprepared nations unawares especially for developing nations like Nigeria. The authors citing ICT-G22 (2005) opined that Nigeria is thus left in the catch-up mode in a very significant and critical human existence and development equation-acquisition of fixed capital equipment without the relevant technologically skilled human capital succeeds only in withering the Nigerian economy and deepening the underdevelopment and poverty situation. Education is a key variable in unlocking the latent skills and talents in humans.

Oluwasanya (2014) identified several complex factors that have become challenges confronting Nigerian higher institutions. These include increasing cost, decreasing quality, and inflexibility in course selection. Other challenges identified are outdated academic equipment as well as obsolete organizational structure. Citing Salami (2001), the author also stated that the challenges of a growing population seeking college degrees, where in the potentials by developing countries to meet these obligations is frequently thwarted by long standing problem of finance, efficiency, equity and governance.

Ngustav (2005) opined that education has enhanced the rapid growth rate of overall GDP in Nigeria. It has provided for the creation of wealth professionals in both the private and public sectors for the required planning, management and running of the national economy: Policy makers and implementers in governments and other agencies require very high education to build up or enrich their human capacity in order to function effectively. Okoh (2008) while emphasizing this role of education in the nation's development quoted Joseph Addison:

> Education is a companion which no misfortune can depress, no crime can destroy, no enemy can alienate, no despotism can enslave. At home a friend, abroad an introduction, in solitude a solace and in society an ornament. It hastens vice, it gives virtue, it guides at once

> grace and government to genius, without it what is man?
> A splendid slave, a reasoning savage.

Economic growth springs from the accumulation of physical and human capital (labour) and advances in production technology – Total Factor Productivity. For most developing countries, conventional growth accounting studies show that accumulation of factors, especially physical capital, has accounted for the greater part of output growth. According to Richardson (2010), World Bank estimates indicate that in the period 1960 – 92, roughly 60 – 70 per cent of growth in per capita incomes was due to increases in physical capital per worker while education contributed a substantial 15 – 20 per cent, with total factor productivity accounting for the rest. Also, Richardson (2010) argued that in most international industries, the main determinant of competitiveness is unit labour cost, and this is where education and training have pride of place. Adequate supply of labour is perhaps the most important economic resource and factor of production. Investment in education and human capital leads to the acquisition of skills that raise labour productivity and allow wide spread use of existing technology as well as promote new technological development. Not surprisingly, the level of human capital in high growth countries has been significantly higher than less successful ones.

As has been emphasized elsewhere, knowledge is seen as the most powerful engine of production that enables mankind to subdue nature and satisfy our wants. Besides, it is seen as the only instrument of production that is excluded from diminishing returns. Furthermore, World Bank report of 1991 indicated that a-one year increase in the average amount of education of the labour force leads to a substantial nine per cent in GDP. In a similar vein, a UNIDO report concluded that Japan's industrial success was due to its unique combination of formal education, vocational education, and post-employment training and on-and-off the job training (Richardson, 2010).

Anna (2007) identified factors influencing human capital growth to include population, population's income, a country's economic growth, educational reforms or policies. He opined that the transition of modern economy to the economy based on knowledge makes human capital one of the main components for economic welfare.

Basically, any activity according to McConnell et al. (2010) that increases the quality (productivity) of labour may be considered an investment in human capital. It includes expenditure not only on former education and on-the-job training, but also

on health, migration, job search and pre-school nurturing of children. According to Todaro and Smith (2009) education and health are basic objectives of development; they are important ends in themselves. Health is central to well-being and education is essential for a satisfying and rewarding life, both are fundamental to the broader notion of expanded human capabilities that lie in the heart of the meaning of development.

Aluko (2015) was of the view that capacity development and human capital development are closely linked and cannot be separated. He opined that they are closely linked or connected in a range of issues including human capital development, through health, education, and training; the accumulation of physical capital that increases the level of investment to generate employment opportunities strengthening governance through institutional policy reforms; and the application of improved technologies, logistics and system to enhance organizational performance, end result which translate to increase in people's incomes and improvement in their quality of life.

A nation's human capital endowment-the knowledge and skills embodied in individuals that enable them to create economic value can be a more important determinant of its long-term success than virtually any other resource. This resource must be invested in and leverage efficiently in order for it to generate returns-for the individual involved as well as the economy as a whole (World Economic Forum, 2016).

However, in the development literature, though the aforementioned has long been recognized, it was brought to the front burner with the works of Romer and Lucas. The growth theory of Romer (1986) and Lucas (1988) emphasized the role of human capital growth framework in the 80s. They opined that in the long-run, output per unit of input could increase even when input has been accounted for. Technically, advanced human capital and a growing knowledge base were important contributors to this growth. The concept refers to the activities and skills of the human resources of the country while human capital for a nation refers to the process of acquiring and increasing the number of persons who have the skills, education and experience which are critical for the economic and political development of the country. Human capital formation is therefore associated with investment in man and his creative productive resource.

Knowledge about technology includes practical knowledge, such as basic knowledge about nutrition and birth control, and technical knowledge such as in the

field of engineering, information and communication technology that can be used to formulate solution to problems such as transportation bottlenecks, security, water pollution, inadequate housing and the likes. Differences in the level of knowledge about technology, often referred to as "knowledge gaps", are large and threaten to increase the gap in income between developed and less developed countries (World Bank, 1998).

Obadan and Uga (1997) opined that the role of advancement in knowledge in human and social progression is profound and universally acknowledged. According to them, the quality of life and living in societies is significantly and positively related to the existing stock of knowledge, as well as the ability to increase and use it effectively in resolving societal problems. In his empirical work on growth, inequality and poverty in Nigeria, Aigbokhan (2008) was able to establish a nexus between household poverty and level of education. The empirical evidence indicated that the less educated the head, the more likely the household would be poor and hence decline in their welfare.

In appraising education as a strategy of human capital development in Nigeria, Adelakun (2011) discovered that:

i.   Adult literacy did not improve by any margin

ii.   The number of pupils per primary school increased and the number of pupils per teacher also increased

iii.   The number of pupils per secondary school increased while the number of pupils per teacher stagnated.

According to WEF (2016), approximately 25000 new workers will enter the labour market every day until 2020, and more than 200 million people globally continue to be out of a job; yet, simultaneously, there is an expected shortage of some 50 million high-skilled job applicants over the coming decade. The organization further stated that there are 90 million children without access to primary school; 150 million children unable to attend secondary school; and hundreds of millions of young people who cannot afford to go to university; while the world is experiencing the shortage of 4 million qualified teachers per year.

It has been suggested by Olaniyan and Bankole (2005) that education not only promotes growth and efficiency, but that it can reduce inequality and impact on disadvantaged background. They argued that education remains the most effective

way by which young people of poor backgrounds can rise in the economic hierarchy because human capital remains the main asset of 90% of the population. This also explains why income inequality is greater in countries where inequality in education is also high (Becker, 1981).

However, between 2009 and 2018, educational sector in Nigeria got a paltry allocation of N3.9 trillion out of N551.19 trillion proposed budget in ten years. That translates to about 7.07% of the total budget estimates in ten years in comparism with the 26% bench mark set by United Nations (UNESCO) for Developing countries (Vanguard Report of 2018). This was also the position canvassed by Ibuzor (2017) when he said that various countries in Africa allocates far more funds of their budget to education than Nigeria. In his research, he found that Burundi allocated 17.24% of its annual budget to education in 2013, Ethiopia allocated 27.02% in the same year. Furthermore, Benin allocated 20.23% of its annual budget to education sector in 2014, while Madagascar allocated 20.33% of its annual budget to education sector in 2012. Similar report indicates that Ghana allocated 23.1%, Liberia 12.1%,Benin 15.9%, and Cape Verde 13.8% of their budget estimates to education in 2017 (Business Day, Jan 3, 2017). With Nigeria less than 10% allocation of its annual budget to educational sector, little wonder that UIS-UNESCO data estimates show that 8.7 million children were out of school in its 2015 report on financing education in Nigeria.

In a recent address at the convocation of Crawford University, Charles Ayo a former Vice Chancellor of Covenant University emphasized one of the current challenges confronting the education sector in Nigeria, when he opined that Nigeria loses a minimum N1trillion annually to education tourism, with about 75,000 Nigerians currently studying in Ghana, Benin Republic and Egypt (Asabor, 2018). This is very worrisome when this loss is compared with the federal government allocation to the education sector in Nigeria annually.

Health is also a major source of human capital formation that contributes to economic growth and development. The world summit for sustainable development according to Amah & Sheiki (2007) recognized health as a resource for, and an indicator for sustainable development. By 1992, Rio declaration recognized the fact that human beings are the center of concerns for sustainable development. They are entitled to health and productive life in harmony with nature. The latter point stressed the important inter-linkage between the social economic environment pillars of sustainable development, all of which are dependent on good health. Health here is defined by WHO (1978) in the declaration at Alma-Ata to mean a state of complete

physical, mental and social well-being, and not just merely the absence of disease or infirmity. Amah et al; (2007) as emphasized by Tamer (1998) said that the extent of any development process aims at national sustainability is dependent on understanding the extent of health and well-being of the people.

Put differently, the negative effect of poor health on human capital and economic growth can be seen through cost of illness, which reduces labour productivity, and leads to irregularity at work. These costs comprise of medical expenses related diagnoses and treatment, opportunity cost of income and the pain and suffering borne by patients and other members of household due to illness. The size and unpredictability of the cost, suggests that families may not be able to smoothen their consumption over period of major illness, especially in LDCs where few individuals are covered by formal health and disability insurance. The fall in income affects the aggregate level of savings and consequently capital formation. The reduction in labour supply and fall in labour at the household level will further cause the nation's labour productivity and supply to fall. This then shows the long-term effects of poor health on economic growth and development (Asensop, Asote, Osei-Akoto & Adokonu, 1998, Gertler, 1999, World Bank 1993 & 1995 Amah et al;2007).

Olaniyan and Bankole (2005) were of the view that improvement in health status leads to increase in life expectancy, which implies more opportunities for people to work and earn more income and subsequently break the yoke of poverty. This stems from the empirical evidence of Deaton (2003) that shows the strong nexus between life expectancy with increase in productivity and income.

Medical Tourism Statistics (2018) shows that 5,000 Nigerians fly out on monthly basis seeking medical treatment in India and other countries. The data show that Nigeria loses over $500 million annually in medical tourism to India alone. The body blamed poor budget funding on health sector as partly responsible for this. It reasoned that for example, only 3.9% of the total budget was earmarked for the health sector in Nigeria's 2018 estimate. On a global scale, the data indicate that Nigeria spends over $1 billion yearly on medical treatment abroad. The countries most visited according to Nigeria's House of Representatives findings are United Kingdom, Germany, USA, Israel, and some other countries in Middle East.

Onyebuchi (2017) said that Nigeria was losing about N175 billion annually to medical tourism. He opined that this "wasted" fund was more than 50% of the proposed budget for 2018 for federal health sector. He stated that the health sector is been denied the much needed funding which is affecting development. He further

emphasized that: "Skilled proficiency becomes a victim as both trainer and trainees are not exposed to enough cases and of course quality of care ultimately suffers. As outbound medical tourism gradually becomes the preference of patience, the local sector loses confidence in the local populace resulting in low esteem and loss of morale among the health personnel".

Epudu, Adinma, Ogbonna & Epudu (2018) found that Nigeria loses $1.35 billion annually to medical tourism out of its estimated 180 million people. On the average, they opined that 9000 medical tourists occur monthly from Nigeria to other countries. India according to them, is a major destination with an average of 500 visits monthly and affordable treatment in modern medicine and specialties. They were of the view that medical tourism in Nigeria increased by 20% annually. They concluded that poor health care delivery system encourages medical tourism from Nigeria which leads to huge foreign exchange waste and medical work force, as over 700 Nigeria medical doctors move to Europe annually. They also blamed poor government funding as one of the factors that had impoverished the health sector.

Ikhuoria (2016) said that Nigeria has not come close to implementing 15% of national budget allocation to the health sector in accordance with the Abuja declaration of 2001, where African countries committed themselves to implementing the policiy. He stated further that other African countries with less resources have committed far more of their national budget to their health sectors. He gave examples of Rwanda that allocated 18% of its annual budget to its health sector, Botswana and Niger Republic that committed 17.8% of their annual budget to their health sectors as well as Zambia and Burkina Faso that committed 16.4% and 15.8% of their national budget to their health sectors in 2016 respectively.

Nutritional status of an individual has also been seen as another form of human capital formation process. It is often based on three anthropometric measures which are height for age, which measures "stunting" or chronic malnutrition, weight for age, a measure of underweight, and weight for height, a measure of wasting or acute malnutrition. Nutritional status has long-term consequences (Todaro, 2009).

Apart from convincing evidence which suggests that nutritional inadequacy increases the risks of death and impairs cognitive development, there are also evidences to show that inadequate nutrition can affect future productivity and earnings and hence poverty. Evidences also abound that if a child under five years does not have the requisite quantity and quality of nutrition, it may cause serious impairment to his intellectual capacity with all its implied consequences when he

grows up as an adult. Investment in better nutrition has a considerable positive effect in terms of economic growth and equality. This is predicated on the fact that healthy individuals would be able to work adequately to earn better income to improve their living condition (Olaniyan & Bankole, 2005, Strauss & Thomas, 1998). Although migration process has also been fingered in individual human capital and capabilities, suffice to add that the aforementioned are the most potent factors central to human capital formation hence the emphasis on them.

In our reviewed literature, none of them made use of the descriptive statistics or trend analysis to illustrate the enormity of the problem of human capital formation and usage in Nigeria in exposing the funding deficits in the key sectors of education and health, especially as it relates to its capital expenditure funding. Beside, none of the reviewed literature simultaneously dealt with both education and health sectors as they relate to the challenges of human capital formation in Nigeria.

3. RESEARCH METHOD

The research method adopted in this study is basically the descriptive. The data used for these analysis were obtained from various sources such as CBN statistical bulletin (various Issues), CBN Annual Reports (Various Issues), Nigeria Health Watch (2016), NBS (Various Issues), Authors' Computation etc. These descriptive statistical charts and graphs were analyzed using Microsoft excel.
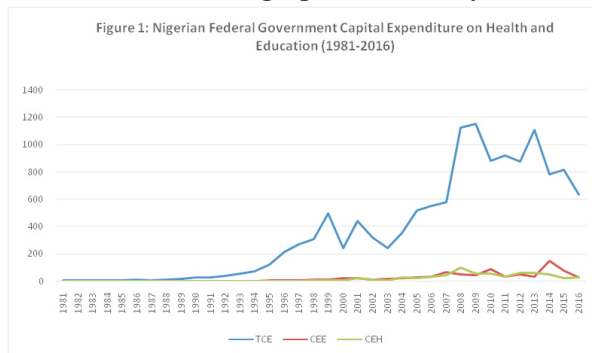
Figure 1: Nigerian Federal Government Capital Expenditure on Health and Education (1981-2016)

Source: Author's Computation from Microsoft Excel

Figure 2: Nigerian Federal Government Recurrent Expenditure on Health and Education
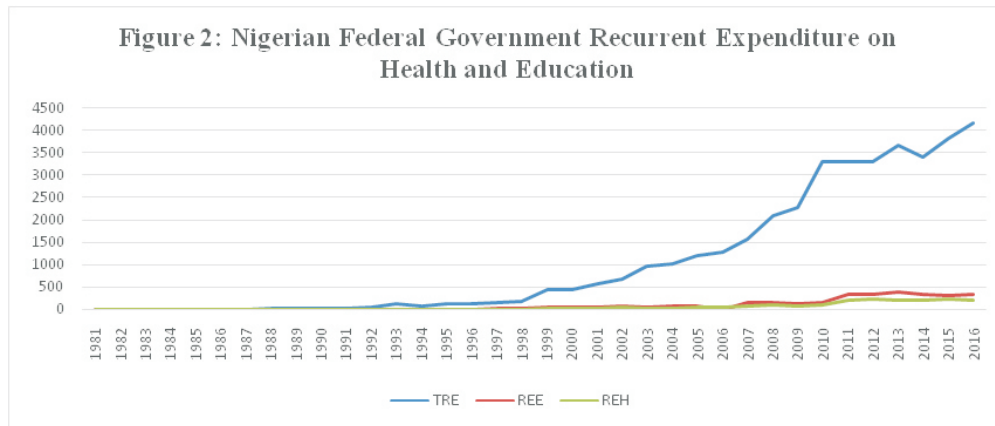
Source: Author's Computation from Microsoft Excel

A Brief Review of Table 1

A critical look at table 1, from Appendix, above will reveal a reluctance on the part of federal government of Nigeria to adequately fund these two key sectors vital to human capital formation in the country, which is quite contrary to their posturing. The data above show that the federal government fell short in all ramifications vis-à-vis internationally accepted best practices in terms of funding education and the health sectors. Okoh (2002) found that only a budget estimate of between 10 – 12% was devoted to education in comparison to 26% as recommended by United Nation - UNESCO.

The data presented in table 1, in Appendix, above lend credence to this assertion. In the whole period of review, funding of education has largely been inconsistent-rising and falling expenditure. While total expenditure on education increased maximally from N610m to N680m in 1981 and 1982 respectively, it experienced drastic falls in the next five years save for 1986, reaching a mere N370m in 1987. This similar trend was recorded between 1988 and 1994, with the year 1992 recording the least expenditure of N670m in that period. Thereafter, it consistently increased till 2010, but for four years of 2001-2003, total expenditure on education were respectively N59.74b and N79.46b, as well as 2008 and 2009 which were N212.80b and N180.52b respectively. However, it continuously increased from 2010 to 2014 reaching the highest amount of N493b in 2014, before dropping to N402.20b in 2015 and N369.60b in 2016 respectively.

Another fact that can be discerned from the table 1 above, from Appendix, is that total recurrent expenditure on education was higher than its capital expenditure in most of the years except in about five years which are 1981, 1982, 1983, 1986 and 1992. The implication of this is that most of the expenditure on education went into salary, wages and other overheads like maintenance and the likes. This perhaps explains the dearth of educational infrastructure that has become the lot of the Nigerian educational system. The gap between recurrent expenditure on education (REE) and capital expenditure on education (CEE) became so large between 2007 and 2016, wherein REE was N150.80b in 2007, CEE was mere N68.30 same year, with the worst case scenario being in 2012 where REE was N348.40b viz-a-viz CEE that was N47.6b in the same period. The year 2016 was not better as CEE was a mere N27:70b as against REE that was N341.88b.

Taking education as a percentage of total federal government expenditure, the result from table, 1, in Appendix is very abysmal in performance. In the period of review, only the years 2000 and 2014 recorded a-two digit percentages of 11.60 and 10.75 respectively, with the rest years averaging between 5 and 6 per cent. The result further shows that 0.72 per cent was recorded in the year 1992, being the lowest in our review period.

Similar trends as observed in the educational sector were the lots of the health sector expenditure. Total government expenditure in the health sector (TEH) was also very inconsistent. Save for a N20m increase from 1981 to 1982, it suffered decreases in the following five years, reaching its lowest level of N110m in the year 1987. Thereafter, it increased sharply from N600m in 1988 to N760m in both years of 1990 and 1991, before plunging to a lower level of N340m in 1992. It first reached the billion naira mark in 1993 recording N4.22b, and dropped again to N3.05b the following year of 1994. However, the most consistent period it experienced increases was between the years 2004 – 2008, before reducing in the two years following, 2009 and 2010 respectively. It also increased between the periods of 2012 and 2013, where it recorded N235.87b, and N282.776b respectively, before declining in the remaining period, where it recorded N250.06b in the year 2016.

The highest funding in the period of review was recorded in 2012 with a total amount of N282.77b recorded as total health expenditure. Just as was observed in the case of education expenditure, the recurrent expenditure on health was higher than its capital in most of the years of review, which explains the fact that salaries, wages, overheads etc. took precedent over capital expenditure in the health sector. This further explains the lack of basic equipment and infrastructure for a successful healthcare delivery

system in Nigeria. Considering health as a percentage of total government expenditure, there is nowhere in the review period where a-two digit figure was recorded as a percentage. The average recorded was between 3 and 4 percent in the review period. In fact, it even recorded below 1 per cent in the years 1987 (0.50%) and 1992 (0.37%) respectively. The highest period where it recorded above 6 per cent was in 2008 and 2012 where it reached 6.03 per cent and 6.13 per cent respectively. These are not in consonance with internationally accepted recommendations of between 10 – 15 percent of GDP by WHO or World Bank or the 2001declaration of 15% of annual budget of African countries commitment to the health sector.

Since both the education and health sectors are similarly plagued with underfunding (especially their capital expenditure funding), it becomes very clear to see while most Nigerians seek alternatives outside the country, thus putting pressures on scarce foreign exchange that would have otherwise been better utilized. This also partly accounts for exacerbating rent-seeking and corrupt activities especially by public servants and political office holders – to meet with the high cost of education and health obligations outside of Nigeria for themselves, spouses, siblings as well as associates. These poor funding and lack of serious commitments of Nigeria to the education and health sectors have plagued both sectors with the phenomenon of brain drain as well as education and medical tourism, which are inimical to the wellbeing of the citizens and currently hurts the economy.

The chart in Figures, 1, and, 2, are very apt in showcasing the poor funding in both health and education sectors. Figure, 1, shows while total capital expenditure (TCE), increased astronomically over the years, capital expenditure on education and health (CEE and CEH) only increased very minimally as the gap between TCE on the one hand and CEE and CEH on the other, shows in the chart. Similar result is discernable in Figure, 2, where Federal government recurrent expenditure (TRE) was considered vis a vis recurrent expenditure in education (REE), and health (REH) in the chart.

Table 2: Descriptive Statistics of the Variables Employed in the Study

	CEE	CEH	REE	REH	TCE	TEE	THE	TRE
Mean	22.1728	17.5182	91.9382	55.72	362.388	114.114	73.2374	1072.904
Median	8.52	6.43	14.85	4.74	241.69	26.38	11.86	178.1
Maximum	149.25	97.2	390.42	237.08	1152.8	493	282.77	4178.59
Minimum	0.14	0.05	0.16	0.04	4.1	0.34	0.11	4.75
Std. Dev.	32.5013	24.0845	127.893	82.1376	380.699	153.285	100.880	1407.966
Skewness	2.15557	1.48789	1.29251	1.31835	0.76591	1.20772	1.10220	1.061302
Kurtosis	8.07497	4.68552	3.15136	3.14583	2.24501	3.01524	2.59314	2.526741
Jarque-Bera	64.6645	17.0571	9.77860	10.1697	4.25323	8.50883	7.32802	6.89708
Probability	0	0.00019	0.00752	0.00619	0.11924	0.01420	0.02562	0.031792
Sum	776.05	613.14	3217.84	1950.2	12683.5	3993.99	2563.31	37551.63
Sum Sq. Dev.	35915.5	19722.2	556132.	229384.	492770	798882.	346016	6740055
Observations	35	35	35	35	35	35	35	35

Source: Author's Computation from E-views Output

A Descriptive Statistics of Variables Employed In the Study

The descriptive statistics in table, 2, above indicates measures of central tendency, dispersion and shape of the data employed in the study. The capital expenditure on Education (CEE) which measures government investment in education in Nigeria has a mean value of 22.17, median value of 8.52 as well as maximum and minimum values of 149.25 and 0.14 respectively. Its standard deviation value of 32.50 shows that the distribution has a fair dispersion around its mean value. Skewness which is one of the measures of shape of a distribution has a value of 2.15 which shows that CEE is positively skewed in the period under review. The kurtosis value of 8.07 shows that the distribution of CEE is leptokurtic with 35 observations. This implies that the distribution is not normal. This was the trend for all other distributions of the variables employed in the study.

On the other hand the capital expenditure on Health (CEH) which is a measure of federal government investment in the Health Sector in Nigeria has a mean and median values of 17.52 and 6.43 respectively. It also has maximum and minimum values of 97.2 and 0.05 respectively. Its standard deviation value of 24.08 indicates a fairly large dispersion of the distribution around its mean. Its skewness and kurtosis values of 1.49 and 4.68 are indicatives of positive skewness and a leptokurtic distribution (not a normal distribution) with 35 observations.

The Recurrent Expenditure on Education (REE) which measures the federal government overheads in education has a mean value of 91.94 and median value of 14.85. It also has a maximum value of 390.42 as well as a minimum value of 0.16. Its standard deviation value of 127.89 indicates that the dispersion around its mean value is large. It has a positive skewness with a value of 3.15, andis leptokurtic in distribution with 35 observations.

The Recurrent Expenditure on Health (REH), a measure of the federal government over-head expenditure on health has values of 55.72 and 4.75 as its mean and median values respectively. It also has a maximum value of 237.08 as well as a minimum value of 0.04. Its standard deviation value of 82.13 indicates a fairly large dispersion along its mean. It has a skewness value of 1.32, which indicates positive distribution. Its kurtosis value of 1.34 shows a platykurtic distribution with 35 observations.

The Total Expenditure on Education (TEE) which is the total amount spent by the federal government on public education in Nigeria, has mean and median values of 114.11 and 28.38 respectively. The distribution also has a maximum value of 493 and a minimum value 0.34. its standard deviation value of 153.28 indicates that the distribution has a large dispersion about its mean value. The distribution also has a skewness value of 121 which is positive, as well as a kurtosis value of 3.01, indicating a leptokurtic distribution with 35 observations.

The Total Health Expenditure (TEH) which is the overall amount spent by federal government on public health in Nigeria, has a mean value of 73.24 and a median value of 178.1 its maximum and minimum values are respectively 4178.59 and 4.75. Its standard deviation value of 1407.97 shows that the TEH dispersion and its mean value is large. Its skewness value of 1.06 indicatesa positive distribution, and a kurtosis value of 2.53 showing a platykurtic distribution with 35 observations.
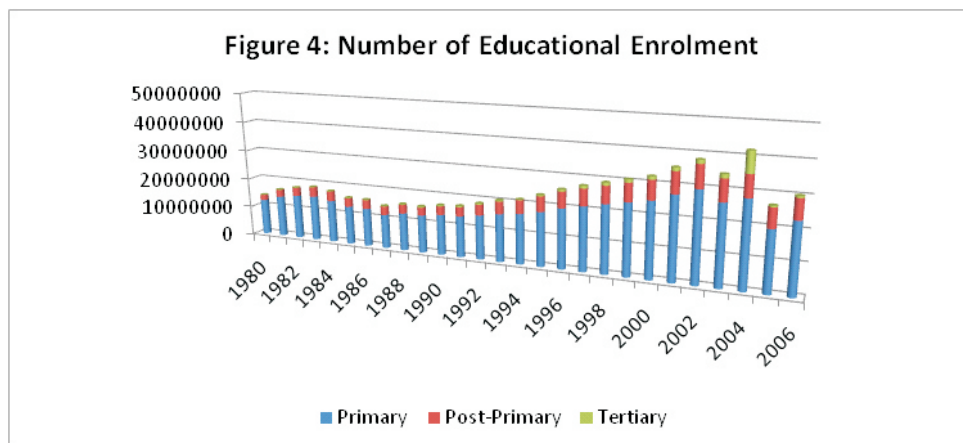
TABLE 3: Number of Educational Institutions and Enrolments in Nigeria (1980 – 2007)

YEAR	NUMBER OF EDUCATIONAL INSTITUTIONS			ENROLMENT		
	Primary	**Post-Primary**	**Tertiary**	**Primary**	**Post-Primary**	**Tertiary**
1980	35,875.0	3,218.0	13.0	12,206,291.0	1,877,057.0	57,742.0
1981	36,683.0	4,969.0	16.0	14,026,819.0	2,473,673.0	74,607.0
1982	37,611.0	5,603.0	19.0	14,964,143.0	2,880,280.0	87,066.0
1983	37,888.0	5,894.0	24.0	15,308,384.0	3,334,644.0	104,683.0
1984	38,211.0	6,190.0	27.0	14,383,487.0	3,402,665.0	116,822.0
1985	35,281.0	5,876.0	24.0	13,025,287.0	2,995,578.0	126,285.0
1986	35,433.0	5,730.0	24.0	12,914,870.0	3,094,349.0	135,783.0
1987	34,266.0	6,092.0	28.0	11,540,178.0	2,934,349.0	150,613.0
1988	33,796.0	6,044.0	104.0	12,690,798.0	2,997,464.0	219,119.0
1989	34,904.0	5,868.0	118.0	12,721,087.0	2,723,791.0	307,702.0
1990	35,433.0	6,001.0	122.0	13,607,249.0	2,901,993.0	326,557.0
1991	35,446.0	5,860.0	124.0	13,776,854.0	3,123,277.0	368,897.0
1992	36,610.0	6,009.0	130.0	14,805,937.0	3,600,620.0	376,122.0
1993	37,812.0	6,162.0	133.0	15,911,888.0	4,150,917.0	383,488.0
1994	38,000.0	6,300.0	133.0	16,683,560.0	4,500,000.0	202,534.7
1995	39,677.0	6,452.0	138.0	17,994,620.0	5,084,546.0	391,035.0
1996	41,660.0	6,646.0	138.0	19,794,082.0	5,389,619.0	689,619.0
1997	43,951.0	7,311.0	138.0	21,161,852.0	5,578,255.0	862,023.0
1998	45,621.0	7,801.0	138.0	22,473,886.0	5,795,807.0	941,329.0
1999	47,902.0	8,113.0	144.0	23,709,949.0	6,056,618.0	983,689.0
2000	48,860.0	8,275.0	144.0	24,895,446.0	6,359,449.0	1,032,873.0
2001	49,343.0	8,275.0	142.0	27,384,991.0	6,995,394.0	1,136,160.0
2002	47,694.0	8,351.0	178.0	29,575,790.0	7,485,072.0	1,249,776.0
2003	52,815.0	11,918.0	202.0	26,292,370.0	7,091,376.0	1,274,772.0
2004	65,627.0	13,333.0	215.0	28,144,967.0	7,091,376.0	6,745,186.0
2005	51,870.0	10,913.0	*75	19,861,681.0	6,398,343.0	*449,949.0
2006	58,604.0	18,338.0	*93	23,017,124.0	6,536,038.0	*606,104.0
2007	NA	NA	*93	NA	NA	727,408.0

Sources: (i) Olu, M.F. and Adenuga, A.O. (2006)
(ii) NBS (2006-2008) Annual Abstracts of Statistics
NB: * Figures are University figures only.

Figure 3: Number Of Educational Institutions

Figure 4: Number of Educational Enrolment
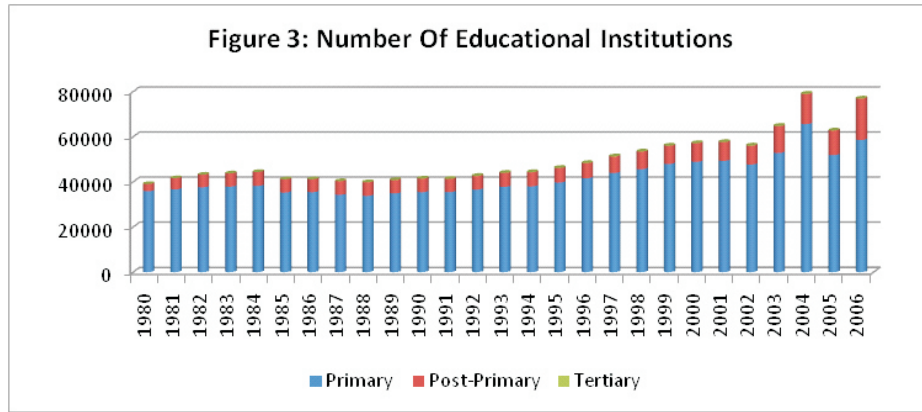
The chart of Figures 3 and 4 above, show the number of educational institutions as well as their enrollment between 1980 and 2016. Figure, 3, chart shows that the number of educational institutions increased from 1980 to 1984, but dropped from 1985 to 1992. It increased thereafter reaching its highest in the year 2004, reducing in 2005, before increasing again in 2006. On the other hand, the number of enrollment as depicted in Figure, 4, shows that between 1980 and 1984, it increased, after which it dropped from 1986 to 1992. However, the enrollment figure continuously increased from 1994 reaching its highest in 2004, before dropping again in 2006 below its 2003 figure. Table 3 indicates that despite the increase in enrollment at various tiers of education in Nigeria, funding of education as indicated in Table 1, in the Appendix, has not matched with these increments. For instance, ETE declined

from 7.89% in 1989 to 0.72% in 1992. Similarly, ETE also declined from 5.25% in 1995 to 4.36% in 1997. In addition, it also dropped from 6.48% in 2003 to 6.06% in 2005.

4. Some Challenges Facing Human Capital Formation process and Usage in Nigeria

It has been acknowledged by World Bank that in general, poor countries possess less knowledge than rich countries and that the difference has important implications for growth and development. The major challenge here is how can the government increase the flow of knowledge especially technical knowledge and adapt it to solving contemporary development challenges such as transportation bottlenecks, water pollution, inadequate housing, computer programming, crimes, energy and also how to increase basic knowledge about nutrition and birth control and the environment among others. The differences in the level of knowledge about technology, known as "knowledge gaps" are not only large, but increasing the income gap between the developed and less developed countries.

Be that as it may, some of the basic changes facing human capital formation and usage in Nigeria from available information and data analysis are;

i. How to bridge the huge funding deficits that plagued the two key sectors of education and health that are germane to human capital formation in Nigeria.

ii. How to mitigate the huge exodus of education and health professionals to other parts of the world and stem the tide of brain drain, and thus reduce the huge shortage of these professionals in the two sectors in Nigeria

iii. There is also the challenge of curtailing education tourism from Nigeria which creates capital flight through huge foreign exchange loss annually.

iv. We also have the challenge on how to stem the trend of out-of-school children in Nigeria which can have huge security implications for future stability in Nigerian North East in particular, and the country as a whole.

v. Another challenge is how the government can formulate and implement polies with regards to education and health sectors, in line with international agreements and treaties, entered into by the government in accordance with international best practices to meet with 21st century standards or goals.

5. CONCLUSION

The findings of this paper point to the fact that the challenges facing human capital formation process in Nigeria is a culmination of years of poor funding that is not in conformity with internationally accepted standard, and treaties entered by the government. Many reasons have been adduced as being responsible for this abysmal performance. The dearth of proper funding, opportunities, innovations creativity and ideas fuels unemployment, incompetence and poverty in Nigeria.

For Nigeria to be able to compete in a 21st century digital world, there is a serious need for radical policy reforms, and reversals of archaic programmes and policies that stand in the way of quality education and training process as well as health care delivery system in Nigeria. These bottlenecks, bureaucracies and rigidities that promote mismanagement, corruption, inefficiencies as well as waste in education and health sectors can be eliminated or mitigated with the right political will and adequate funding, since most of them are not insurmountable.

6. RECOMMENDATIONS

Based on the aforementioned concerns and challenges militating against human capital formation in Nigeria, we put forward some suggestions that will help ameliorate the situation.

i. The government at every tier must adhere to internationally accepted funding for education and health sectors, more so, since Nigeria is signatories to some of these international statues. This is key since proper funding and motivation can go a long way to curb brain drain as well as education and health tourisms that bedevil the sectors.

ii. The authority should streamline all parastatals and departments of the ministries of education and health. Shrinking them will make them more functional and productive and curb waste, mismanagement and corruption that characterize them in terms of inflated overheads, jumbo allowances paid to their personnel as well as forestall duplication of efforts. The government should commit itself to implementing the capital expenditures of education and health sectors budget in total, not just focusing on totally implementing the recurrent components of the budget on education and health alone as was the case in the study.

iii. Licenses, approval or accreditations of both private and public universities, schools and courses should be based on specific courses, specializations and programmes that are globally competitive and relevant to 21st century goal and not just replication of already over flogged areas that are best becoming obsolete in other climes.

iv. There should be laws formulated and implemented to compel political office holders to patronize Nigerian education and health institutions, save such services are not readily available in the country, this will create the vigilance that is needed for an efficient running of both institutions.

v. The issue of out-of-school children problem can be solved through enabling laws that compel parents to take their children to schools, and penalties meted out to defaulters. At least, primary and secondary school education in Nigeria should be made free and compulsory to all children of school age.

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UNEMPLOYMENT AND POVERTY AMONG YOUTH IN BENUE STATE: AN EMPIRICAL EVIDENCE FROM GRADUATE *OKADA* RIDERS IN MAKURDI METROPOLIS.

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Abstract

This study investigates unemployment and poverty among youth in Makurdi Metropolis and its implication on their economic life. The objective of the study is to determine the relationship between income from the Okada business and economic wellbeing of youth engaged in Okada business. The field survey was conducted on a sample of 408 respondents drawn from 6 wards in Makurdi Metropolis. Descriptive statistic, Chi-Square and Spearman Correlation analysis were used to analyse the responses from 287 questionnaires with a satisfactory response rate of 70 percent. The study revealed youth involved in Okada business in Makurdi metropolis are not gainfully employed and are in the state of absolute poverty. Their take-home income cannot sustain their basic need and this accounted for their criminal activities. Also, the study revealed that the nature of the job provided is risky given the rate of accident and road hazards. The study therefore recommends that state government intervenes through regulations geared towards making the transport sector lucrative so as to reduce poverty among the youth, ensure their wellbeing and sustainability of the economy. The study also suggests ways of government intervention to include provision of good road, proper licensing to certify Okada riders and training of youths on ways to diverse their income so as to become employers of labour.

Key words: Unemployment, Poverty, criminal activities, Okada Business.

INTRODUCTION

Youth unemployment is one of the lingering problems that has gained unprecedented attention among scholars and stakeholders in Nigeria. The difficulty in finding employment as a means for securing a livelihood especially by youths is not only a loss to the youth but also to the nation in terms of loss of productive hours and revenue. The National Bureau of Statistics in Nigeria [NBS], (2016), revealed the alarming rate of youth unemployment which is as much as 50% of the over 167 million people in Nigeria. According to Oduwole, (2015), Okhiria & Obadeyi, (2015), the problem of youth unemployment has a close nexus to youth poverty

leading to a multi-dimensional phenomenon that results to undesirable human living condition corresponding to the inability of these youth meeting their needs; nutrition, education, health care, housing, and income. This development is burdensome and poses a threat to the wellbeing of the nation. Many youths in the rural and urban centres of Nigeria, as the result, though have some form of education and skills cannot find jobs comparable to their qualifications or skills, but resort to *Okada* business (commercial Motor circle rider).

Unemployment, underemployment and poverty are the main socio-economic cause of insecurity in Nigeria (Usman, 2015). Poverty and unemployment is on the increase in Benue state despite the wide variety of National and international measures undertaken to eradicate it. The Benue Advanced plan (2003) showed that, Benue state accounts for 19% of Nigerian's population and 33% of the Benue state population is poor (11% poor and 22% extremely poor) and more than 50% of the poor are the youth. This problem is specific especially to those from low-income backgrounds and limited education. Ukwu, (2002), and Ogunrinola, (2011), had to describe Nigeria as one of the poorest of the poor among the nations of the world, confronted not just with pockets of poverty, disadvantaged or marginalized areas, groups and individuals but with a situation in which most of the population exist at standards of living below those required for full development and enjoyment of individual and societal well-being. The teaming population of unemployed youths in Benue state and the entire Nigeria Nation is trapped in this vicious cycle without hope or opportunity, breeding desperation, and daily suffering. The high rate of open unemployment especially among the youths in every city in Nigeria is as prevalent as the rate of underemployed. Both are the major factors responsible for low standard of living (Onuoha, 2008). As a result, poverty is widespread in most cities and urban areas across Nigeria. This paper examines whether Okada business reduces poverty and unemployment among youths engaged in Okada riding business.

It is obvious that youth unemployment, apart from obstructing economic growth in the nation, also constitutes political unrest for the country (Ajufo 2013). This situation has contributed in recent time to the increase in crimes and other social vices such as arm robbery, thuggery, Boko Haram, Militancy, armed robbery, prostitution and child trafficking, cultism and drug abuse to mention a few in our society in recent time. Although real life statistics, which could serve better than official statistics, in unravelling the extent to which Nigeria has underdeveloped and or disempowered her youthful population arising from pervasive unemployment and

poverty is not available (Onuoha, 2007), the consequences have indescribable effect on the economic and the social wellbeing of the of the nation. According to Ezie (2012), the youth unemployment situation in Nigeria is disturbing and even more disheartening is the fact that the country's economic condition cannot absorb an optimal proportion of its labour force.

Measures such as national Economic Empowerment and Development Strategy (NEEDS), Subsidy Re-Investment and Empowerment Programmes; (SURE-P), National Directorate of Employment (NDE), to mention a few are set up to eradicate unemployment and poverty. Ajufo, (2013) attributed the failure of the measures to; inadequate conceptualisations of development and poverty, failure to identify and to emphasize the true underlying causes of the problem, wrong programmatic prescriptions, and lack of organizational requirements for programme implementation. For these reasons, majority of jobless youth stream from the rural areas to urban areas in search of jobs.

Although the major weakness in the Nigeria economy is traced to the fact that it depended solely on crude oil for survival and diverted from other sources of employment, the Nigerian Government in recent time is trying to diversifying its economy, a possible avenue for job creation and poverty reduction. The result is still vague. There is an increasing trend of informal sector job creation outpacing formal sector job creation, forcing youth to settle for less; which is underemployment. The informal job creators take advantage of the desperate job seeker and greatly exploit them. Accordingly, out of a total youth labour force of 38.2 million (representing 48.7% of total labour force in Nigeria of 78.48millon), a total of 15.2millon of them were either unemployed or underemployed in 2016 (NBS, 2016).

The Nigeria youth after graduation mostly remain unemployed (Olukayode, 2017). According to Oduwole, (2015) & Usman, (2015), criminal act among the youth is on the increase as a result redundancy of the youth. They said that youth have been found to be involved in arm robbery and cultism, many have been caught in petroleum pipe line vandalization and the sale adulterated petroleum products. Many are also members of area boys who bully vulnerable citizens and Boko Haram a terrorist group from the North East, and on the part of girls, prostitution (call-girl) activities is on the increase.

The unemployment and the poverty reduction programmes are being overtaken by the manipulation of the existing rule, supervision of the programmes, and also by

lack of due process and the destruction of the enduring democratic value (Kama & Adisun, 2013). This corrupted system is a source of worry to Nigeria as a nation. The youth in Nigeria have been made redundant and turned into hoodlums due to poor allocation of resources as a result of corruption. Although, *Okada* operation is one of the major providers of employment for youths in Nigeria who would have otherwise remain unemployed, the question is; is *Okada* business able to solve the problem of unemployment? can the take-home income from *Okada* business be able to sustain the *Okada* riders' basic needs and reduce their poverty? What is the cause and the consequence of the criminal activities among the *Okada* riding youth? It is against this background that it becomes imperative to examine youth unemployment via the youth engaging in the *Okada* business as a result of Joblessness. This study is guided by two specific objectives: first is to examine the relationship between income from *Okada* business and economic wellbeing among the *Okada* riding youth in Benue state. Second is to determine the effects of the *Okada* business on the criminal activities of *Okada* riding youth in Benue state. The rest of the paper consists of literature review, methodology, finding, summary, conclusion and recommendation.

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

This study is guided by two main theories; the human capital theory and the human needs theory. The human capital theory advocated by Becker (1964) identifies human characteristics which can increase income. These characteristics comprises of individual's knowledge and skill that is partly acquired through education. Lydall (1968) in support of Becker's theory, argued that it is the variation in the individuals' level of knowledge and skill in combination with intelligence, environment and education that account for the format in the distribution of the variations in personal income. The graduates in *Okada* riding business in Benue state and in Nigeria as a whole have acquired various skills and education yet they could not be gainfully employed because of corruption and manipulations within the system. This deprivation makes the youth in the Okada riding business to channel their energy in to wrong endeavours.

The Human Needs Theory (HNT) is based on the hypothesis that humans have basic needs that have to be met in order to maintain stable societies. The (HNT) was developed in the 1970s and 1980s by John Burton as a generic or holistic theory of human behaviour. The theory maintained that; human needs must be met if societies are to be stable. Unless identity needs are met in multi-ethnic societies and every social system has distributive justice, a sense of control, and prospects for the pursuit

of all other human societal developmental needs, instability and conflict are inevitable" and a situation where these theories do not correlate, the resultant effect is frustration. The frustration of not satisfying these needs leads to aggression and subsequently, conflict. The importance of these theories to the paper is that it recognizes the needs to provide suitable jobs for the educated youth and keep them off the streets.

Adebayo (2013) studied the implication of youths' unemployment in Nigeria, with the aim of examining the nexus of youth unemployment, crime on national development in Nigeria. Using a descriptive analysis, the study discovered that criminal activities such as armed robbery, kidnapping, political thuggery, militancy and other social vices found among the unemployed and jobless youths have contributed greatly to the slow pace of development in Nigeria. He suggested that addressing youths' unemployment will stem the tide of crime and foster rapid development in Nigeria. This is true for nation that seeks to develop its economy, since development means increase in productivity and social and the political wellbeing of the citizen.

Similarly, Oduwole (2015) examined the nexus between youth unemployment and poverty in Nigeria. Using descriptive analysis, the study found out that youth unemployment and poverty was not abating and recommended that government at all levels should demonstrate a commitment towards responsive governance, with focus on jobs creation and eradication of poverty. In addition, appropriate authorities should endeavour to sensitize the citizens on the need to embrace birth control measures for the purpose of engendering sustainable development. Although increase in population poses danger to the society, report from Shea and the NCEAS working group on population management (1998) showed control of population is no more a problem since researches have shown that management of population is the most important solution to the population problem. Thus, emphasis should be made on the management of population by the relevant authorities in the country.

Afolabi (2015), studied the effect of entrepreneurship on economic growth and development in Nigeria, using narrative textual case study the study asserted that although Nigeria is rich with ample human and natural resources to create job, these opportunities are dampened by inappropriate industrial policy interventions aimed at stimulating job creation ventures or entrepreneurship that would have created more jobs and reduced unemployment in the country. He recommended that youth should be trained to possess skills which are well-matched with real labour market demand.

Also, development of a special career guidance counselling should be encouraged and entrepreneurship education should be introduction into the school curriculum.

Uddin and Uddin (2015) studied the causes, effects and solutions to youth unemployment. Using descriptive approach of the previous researches, they found out that youth unemployment and poverty is mainly caused by increase in youth population and suggested that government should invest heavily on education to enable the youth become self-reliant. Instead of self- reliance in Okada riding, entrepreneurship should be emphasised. An individual with entrepreneurial skill and a mental capacity to think creatively and has an innovative behaviour that can provoke the spirit to undertaking timely creation of new ideas that can improve his livelihood (Afolabi 2014).

Akinlade and Brieger (2004) examined the role of an urban informal transport, using *Okada* as a case study to see its role in the provision of self-employment and income generating opportunity for the urban unemployed. Using OLS technique, the study found out that, Okada riders are mostly young school leavers, and even though they earn income more than the minimum wage, they are accident prone. They advocated for a more rigorous regulation of the sector to promote safety of the operators and passengers.

Also, Sanusi and Emmelin (2015) researched on commercial motor cycle rider's perceptions of risk and road safety in urban Nigeria with the aim of determining the public health challenges as a result of the emerging trend of increasing or high mortality rate among commercial motorcycle riders. A qualitative approach of data collection from in-depth interviews was conducted. It was generally accepted, that risk taking is an intrinsic part of the occupation and that risk taking is a way to make ends meet. They   recommended that to reduce the risk, adequate regulation regarding training and licensing of the riders and traffic rules should be tightened to enforce road safety.

Mbalisi and Nzokuru (2014) studied the dangers associated with commercial motorcycle transport business. They adopted the use of descriptive approach of analysis and found out that, in the perceived benefits of commercial motorcycle transport business, the dangers associated with it outweigh its benefits. They recommended that serious attention and recognition from the government and the general public in all ramifications should be given to adult education in Nigeria. Adult education becomes very important especially for those *Okada* riders who have

no form of western education. Most of them come from the rural areas without any form of education to take up Okada riding job thereby causing accident on the roads. This calls on the relevant public authorities, the Road Safety Corps and the Traffic Wardens organization, to ensure that the *Okada* road users have a proper traffic road education.

Most of the *Okada* riders have no traffic education as such they carry out jungle justice and take laws in to their hands, causing accidents on the high ways that often result in loss of innocent lives (Akinlade & Brieger, 2003; Solagberu, Ofoegbu, Ogundipe, Adekanye, & Abdur – Rahman, 2006). Sanusi & Emmelin (2015) for instance, studied motorcycle taxi accidents, and asserted that Okadas, like motorcyclists elsewhere, have a higher rate of crippling and fatal accidents per unit of distance travelled than automobiles. The *Okada* riders are exposed to harsh weather (hot sun, storm, rains) which leaves them bare to sickness and eventually death. The tedious job has lured many into taking "energy boosting stuff" (drugs) which is detrimental to their health

The rising crime rate in the Nigerian towns and cities is associated with Okada riding youths. Mbalisi & Nzokuru (2014) and Solaja, Kaljaiye, Itsuokor, (2015) asserted that *Okada* operations in Nigeria are seen to constitute a serious threat to the security of lives and property of Nigeria citizens. The criminal activities range from theft of purses and mobile phones, grand larceny, and even kidnapping, politically motivated killings and rape. The pervasive unemployment and poverty according to Oduwole (2015) has made the youth to unleash their frustration on the general society via hawking, vandalizing pipelines and adulterating petroleum products (South-South), Urchins (area boys) syndrome in Lagos, South-West), rabbles of militants in the Niger Delta, Boko Haram in the (North-East) on the part of the male youth, while the female youths resort to prostitution (call-girl) activities.

Ogunrinola, (2011) researched on the informal self-employment and poverty alleviation on motorcycle taxi riders in Nigeria. Using data generated from a survey of 777 randomly selected auto cycle riders in two cities in Nigeria and the SPSS software aided data analysis and OLS technique, the study found out that the subsector is a high employer of young school leavers in the accident-prone job of *Okada* riding and the earnings analysis show that 86% of the operators earn above the minimum wage level and pointed out that, there is need for a more rigorous regulation of the sector to promote safety. Most motorcycle riders are ignorant of road safety. They are mostly found to be unaware of traffic laws, most are unlicensed and susceptible to accidents.

Hula, (2012), assessed the intra-urban road traffic accident among motorcyclists in Makurdi urban area. The study used a multi-stage simple random sampling technique where about 1200 respondents were interviewed. The result showed that commercial motorcycle provides a lucrative employment opportunity for many youths in Makurdi and thus reduce poverty. He suggested a holistic approach to transportation system development and management, since commercial Motorcycle has become an indispensable or an integral part of public transport in Nigeria.

Czeh, Kamara, Mrozek and Nuah (2012), assessed the transport and mobility challenges of informal motorcycle transport in Liberia, using descriptive method of analysis found out that, apart from being an indispensable and integral part of the public transport, the commercial motorcycle popularly called phen-phen, provides up to 60% of motorized transport services to Moroniva's people and employment that aid in the provision of daily livelihood for more than half a million poor rider and their families. Just like in Makurdi Metropolis, they also found out from their study that though, the commercial motorcyclists are mostly found to be unaware of road traffic laws, unlicensed and susceptible to accident, the business not only provide jobs for the riders, it is also a mechanism for poverty reduction.

Kumar (2011) researched on the emerging roll of motorcycles in Africa cities, a political economy prospective, where three cities of sub-Sahara region namely Duolala (Cameroon), Lagos (Nigeria) and Kampala (Uganda) were used, and using cross sectional data obtain from primary data source; questionnaire and focus group discussion, he found out that, though commercial motorcycles are found to be associated with increase in motorcyle accident, pollution congestion and crime, the motorcycle business generates employment for the youths and responds to the little financial demands, and provide door to door services for the public. The motorcycle business has obviously become indispensable and relevant because of its ability to access the most African roads that are not motorable.

The issue of Youth unemployment and poverty is a very sensitive and delicate one that requires utmost attention. However not much study has been done on the poverty implications of commercial motorcycle (*Okada)* operations. Few studies have emphasised the alarming rate of the risk involves in the Okada business. None has investigated the relationship between the income of the business and the lives of the *Okada* riders

METHODOLOGY

Research Design

The study targeted population comprising some registered tertiary school graduates *Okada* riders who are members of the Benue State Motorcycle Association (BEMOA) in Makurdi local Government. The choice of tertiary graduate was aimed at drawing the attention of Government both federal and state, to the level of unemployment and poverty in Benue State among educated youth who deserve a better job than *Okada* riding. According to BEMOA, about 900 tertiary school graduate *Okada* riders registered with the association in Makurdi metropolis within 2015-2017 and operated from the 38 BEMOA zones across the 11 council wards of the local government although there are many more that are not registered.

Study area

Makurdi local government is one of the twenty-three local government areas created in Benue states in 1976. According to the National population commission [NPC] (2015), the population in Makurdi was estimated to be 342500 people of which more than 50% of the population are youth. The town is divided into Northern and Southern parts. The Northern part is made up of the following council wards: Agan, North Bank I and II and Mbalagh council wards. The southern part of the town comprises Ankpa/wadata, Bar, Central South/Mission, Clerk/Market, Fiidi, Modern Market, Wailumayo.

Population and Sampling

To draw up the sampling structure, the six-council ward were selected using a Fish Ball sampling technique. A fish ball or lottery sampling technique is a random sampling technique in which the samples for analysis are randomly picked as representative of the study sample with or without replacement. Names of the council wards were written on pieces of papers and placed in a bowl ready for selection. From the three council wards in the Northern part of the metropolis, two council wards (Agan and North Bank) were randomly picked and the remaining four council wards (Ankpa/Wdata, Modern Market, Fiidi and Wailumayo) were randomly picked from the nine council wards from the southern part of the metropolis and this makes a total of 6 wards. The numbers of registered Okada graduate according to the BEMQA's record in the 6 selected wards are 408.   The *Okada* riding business has organisational structure with officials posted to the

various zones to manage the affairs of each take-off point. With the help of the officers' allocated to the enumerators, the questionnaires were administered to only OND, HND NCE and DEGREE graduate *Okada* riders. Some of the respondents responded right at the take-off post and the others who were unable to respond at the take-off post did that after work and the questionnaires were returned to the officials at the take-off post. Some of the questionnaires were administered at their main office through a BEMOA staff who trained to serve as an enumerator.

The target population of this study consist of the 408 of registered Okada graduate in the selected wards. Since the entire population can be accessed, the study therefore covered the entire population. Thus, there was no need for population sampling. To obtain maximum response, 408   questionnaires were shared out based on the population of the registered Okada riders in the various wards. The distribution of the registered Okada riders in each of the wards and the questionnaires retrieved are presented in table 1.

Table 1: The distribution of and returned questionnaires

S/N	Wards	Registered Okada riders	Issued Questionnaires	Returned Questionnaires	Percentage returned
1	Agan	43	43	35	81.4
2	Wdata/Ankpa	55	55	43	78.2
3	Fiidi	185	185	106	57.3
4	Modern Market	27	27	26	96.3
5	North Bank	28	28	26	92.8
6	Wailumayo	70	70	51	72.9
Total		408	408	287	70.1

Source: Author's compilation.

Table 1 shows the total questionnaires issued and those returned by the respondents in the 6 wards. Out of a total of 408 questionnaires issued, 287 questionnaires were filled and returned. This is a response rate of about 70 percent. The response is high if you take into consideration the nature of Okada business where the respondents are always on transit and are competing for potential customers. This makes it difficult for the researchers to track all those who were issued questionnaires but with the help of the BEMOE staff, respondents were able to fill and return 287 questionnaires.

Of the 287 returned questionnaires, 223, which make up 78% of the respondents, came from the southern part of the metropolis, while 64 which is 22% of the respondents are from the northern part of Makurdi metropolis. Fildi ward has the

highest number of respondents (106 questionnaires were returned). This represents 36.9% of the respondents. The high rate of response from Fildi ward is as a result of the location of Banks, Markets, institution like University and teaching hospital. Next to Fildi council ward is Wailomayo with 49 repondents and 17.1% of the total repondents. The remaining council wards are Wdata/Ankpan, Agan, North Bank, and Modern Market with 41(14.2%), 35(12.2%), 29(10.1%) and 27(9.5%) respondents respectively. The returned questionnaires were verified before the analysis was conducted.

To achieve the objectives of this study, the study employed the Spearman Correlation and chi-square analysis. The chi-square analysis is employed to determine whether there exists a relationship between income and the tendency for youth engaged in Okada riding to commit crimes. The spearman correlation analysis is used to measure the degree of association between income and economic wellbeing.

PRESENTATION AND DISCUSSION OF RESULTS

The study presents the demographic characteristics of the respondents to determine the potentials, responsibility and capability of the respondents. The characteristics of the respondent are shown in table 2 thus;

Table 2: Demographic Characteristics

	Variable		Frequency	Percentage
		15-30	99	34.5
		31-35	122	42.5
1.	Age of the respondents	36-40	40	14
		41-45	26	9
		Total	287	100
		Male	287	100
2.	Gender	Female	0	0
		Total	287	100
		NCE	89	31
		OND/ND	64	22
3.	Educational status	HND	62	23
		DEGREE	62	23
		Missing response	10	5
		Total	287	100
		Single	110	38
4.	Marital status	Married	163	57
		Divorced	11	4
		Missing response	3	2
		Total	287	100
5.	No of children	0-2	80	28
		3-5	170	59
		40 and above	35	12
		Missing response	2	1
	Total	Total	287	100

Source: Author's compilation

Table 2 shows the demographic characteristics of the respondents. The age status of the respondents was taken for the purpose of examining the waste potential of the Okada riders. The UNDP (2015) recognises ages 30-45 of the labour force as the prime age of a nation's workforce. The highest number of 122 respondents fell within the age bracket of 31- 35, which give 42.3% of the entire respondents. The result here showed the level of redundancy and the potential of a strong labour force in the study area. The respondents between the age brackets of 15-30 are 99 respondents, which gives 34.5% of the total population, it means that the redundancy has been a

continuous trend. 40 respondents which represent 13.9% of the total population fell within the age group of 36-40 years, while only 26 (9.1%) fell within the age group of 41 and above years. The distribution on age of the respondents shows that poverty started from the point of graduation and it is likely to continue in this trend for a long time if the problem of unemployment is not solved. In their response, many of the *Okada* riders indicated that they started riding motorcycle early in their lives because of the lack of other readily available means of livelihood. This explains the ease with which they take up *Okada* riding to get themselves employed instead of remaining redundant. Thus, the potentials of the capable youth involved in the *Okada* riding business in the Makurdi metropolis are wasting. The economic cost of this is reduction of output and erosion of the youth human capital. The maximum benefit that the youth in the metropolis would have gained from the harmonization of their skill and the distribution of economic opportunities has eluded them leaving them in a flow of poverty. Therefore,   graduates, especially the youth involved in *Okada* business in Makurdi metropolis are grossly under employed and are poor.

In terms of gender, all the respondents are male. Although no female is involved in the Okada business, there are female who have acquired one form of education or the other who are unemployed. The non- involvement of female in *Okada* riding business could be as result of believes and values of the people in the area and coupled with the risky nature of the job in terms of being prone to accident and harassment. Another possible reason as maintained by Olukayode (2017) is that most girls who are graduates, and unemployed resort into prostitution.

The marital status and the number of children of respondents taken were for the purpose of determining the level of *Okada* riders' responsibilities. The married men among the respondents are 163 which represent 57% of the total respondents. 110 (38%) respondents are not married and there were 3 (2%) missing response. The rest of the 11(3.8) respondents are divorced. 170(59%) of the respondents have 3-5 children. 80(28%) respondents have 0-2 children while only 36 respondents have 4 and above children. There was no response on marital status from 2(%) respondents. This result, by implication, means that, the *Okada* business should be able to provide for food, shelter, education for the children, health care and general up keep of the family. A good number of the *Okada* riders said that income from *Okada* business is not enough to provide their need. Thus, there is declined access to shelter, education and health care, coupled with increased malnutrition which leads to reduced life span of the youth in the *Okada* riding business in the metropolis. The situatation of

most of the Okada riders shows that they are helpless and feel not responsible to themselves and families.

The educational qualification status was to show the youth involve Okada businesses' skill and capability. From this part of the nation, education is taken in a high premium. About 50% of an average family in Benue State are educated (UBEC, 2010). Apart from NCE that has a higher number, the distribution of the remaining qualifications is almost even. The reason is that, all the institution responsible for the awarding these various degrees are located in the state. NCE has the majority number of 89 respondents, which represents 31% of the total respondents. Others include; Degree holders, 64 (23%), HND, 62 (22%) while OND/ND holders were 62 (23%) in number. There was no response from 10 (5%) respondents on educational qualification. The study shows the graduate in the Okada riding business have one form of skill and or the other as they are highly educated. They therefore have the capability to contribution to the nation's economy.

Response on Business Characteristics

In addition to the respondent's demographic characteristics, the study elicited information on the business characteristics from the respondents, so as to determining the length of unemployment what determine their choice of business and the hazard in the *Okada*. The responses of respondents of business characteristics of respondents are shown in table 3.

Table 3: Distribution of Respondents' Business Characteristics

	QUESTION	RESPONSE	FREQUECY	PECENTAGE
1.	How long have you graduated from school	2-6	80	27.9
		7-11	170	59
		13 and above	37	12.9
	Total		287	100
2.	What is your Reason for Engaging in okada riding business	No formal job	254	89
		Love for the business	7	2.5
		As supplement	23	8.10
	Total		287	100
3.	What is the nature of your *Okada* business operation?	Full	75	26
		Part time	197	74
	Total		287	100
4.	How many times have you involved in an accident at the cause of your business	1-3	71	24.7
		3-5	122	76.
		6 and above	59	20.6
		Never	35	12.2
	Total	287	287	100
5.	Reason for been in police custody	Traffic offence	144	50.2
		Fight	69	24
		Theft	30	10.5
		Never	44	15.3
	Total		287	100

Source: Author's compilation.

The year of graduation was to determine how long the respondents were unemployed. The highest number of 170 (59%) respondents has been unemployed for 7-11years. Most of these youths in this age bracket would have graduated at the age of twenty-five years and within ten years of their graduation continue to hope to secure a gainful employment in line with the queuing/educated youth hypothesis but are still unemployed. 80(27.9%) of the respondents have been unemployed for four years. 37 of the respondents representing 12.9% of the total respondents have been unemployed for 13 years and above after graduation. Consequently, majority of the respondents of 254 (89%) had to join *Okada* business because of lack of formal job. 7 (2.5%) of the respondents joined for love of the business and 23(8.10%) of the respondents joined to supplement their income. The result implies that the graduates' involvement in *Okada* business is borne out of necessity; they must be found to been engaged in a business whether it is sustainable or not. On the average, majority of them have been unemployed for 10 years.

All except 35 (12.2%) respondents have been involved in an accident in the cause of doing the business. This result agrees with Akinlade and Brieger (2004), Mbalisi and Nzokuru (2014), who in their studies asserted that the dangers associated with *Okada* business outweigh its benefits. 122(48%) respondents, had accident 3-5 times followed by 71 (16.7%) of the respondents who have had accident only 1-2 times. 59(24.7%) respondents had accidents 6 times and above.   A lot of the respondents say they have been sick at one point or the other because of the hazard of being in the sun, rain dust and contagious air in the cause of the work and many died as the result of accident. This is in accordance with the work of Sanusi and Emmelin (2015) who researched on commercial motor cycle 'derivers' perceptions of risk and road safety in urban Nigeria and found out that there was an emerging trend of high mortality among commercial motorcycle riders. The *Okada* riding business is therefore risky and dangerous for the youth in Makurdi metropolis.

To determine the restiveness of the unemployed youth, a survey of those who have been involved in one form of police case or the other was carried out. 144 (50.2%) of the respondents admitted to have committed traffic offence and have been in police custody, 69 (24%) of the respondents have been in police custody for fighting, 30 (10.5%) of respondents have been in custody for theft and 44 (15.3%) have never been in the police custody. This report confirms the restiveness of the *Okada* riding youth in line with the assertion of Oduwole (2015) who found out that unemployment of the youth has made the youth to unleash their frustration on the general society via crime; frustration that emerge from social exclusion and lack of social recognition which often make friend and relations to regard them as liability in the society. Therefore, youths involved in Okada business in Makurdi metropolis are morally or ethically shattered and have a broken social relationship.

Reports on Earnings and the Expenditure of the Respondents

The study elicits and discusses the earnings and expenditures of the respondents to determine the profitability and the sustainability of the *Okada* business. The responses of respondents on the earnings and expenditures are shown in table 4.

Table 4. Earnings and the Expenditure of the Respondents

	QUESTION	RESPONDS	FREQUENCY		PERCENTAGE
1.	Motorcycle status	Owner	151		52.6
		Rented	136		47.4
			Owner	Rented	Total
2.		Less than 10,000	20	14	34
	What is your total earning	N11,000 – N20,000	42	44	86
	income in a month?	N21,000-30,000	72	78	150
		N31,000-40,000	14	-	14
		N41,000-50,000	3		3
	Total		151	136	287
3.	How much do you spend	N500 – N10,000	30	80	110
	on Food in a month in the	N11,000 - N20,000	100	52	152
	course of work?	N21,000 – N30,000	22	3	25
		N31,000 – 40,000	-	-	
		41,000 and above	-	-	
	Total		152	134	287
4.	How much do you spend	N1000 – N2000	61	20	81
	on repairs in a month?	N3000 – N4000	130	5	135
		N5000 and above	71	-	-
			262	25	287
	Total				
5.	How much do you spend	N4,000 – 10000	42	43	85
	on fuel?	N11000 -N150000	75	93	168
		N16000 –N20000	34		34
		21000 and above	-		
	Total		151	136	287
6.	How much do you take				
	home (save) in a month	N0 – N10000	72	110	136
		N11,000 -N20,000	73	22	95
		N21,000 –N30,000	53	3	56
		30,000 and 40,000	-	-	-
		Total	151	136	287
7.	Does your take home meet	Yes	42	-	42
	your basic needs?				
		No	109	136	245
		Total	151	136	287

Source: Author's compilation.

Table 4 shows the earnings and expenditure of the Respondents. To determine the real monthly earned income of the *Okada* riders, and the profitability of the *Okada* business, the total income earned in a month by the *Okada* riders and their expenditure are examined. For good result, two classes of the riders were surveyed, those who own the motorcycle and the hired operators. 151 (52.8%) respondents owned the motorcycle used for the business while 136 (47.8%) respondents are hired operators. Out of the 151 respondents who owned motorcycle, only 14 earn less than ten thousand in a month averagely, while 20 hired *Okada* riders earn less than N10,000 on an average in a month. 86 of the respondents of which 44 are owner and 42 hired *Okada* riders earn N11, 000-20,000. A high number of 150 of which 72 and 78 of owner and hired *Okada* riders respectively earn N21, 000-N30, 000 averagely in a month.   Only the *Okada* owners earn N30,000 and above. This implies that owning the motorcycle helps a great deal in income earning in *Okada* business. The average income of the hired operators is low because some percentage of the earned income is paid as rent. Their machines are often collected from them by the owner for not remitting the rent. As such, some said that they have worked for 1-5 different employers. When asked why the low income, majority of the respondents said that the *Okada* riding business is flooded, implying that there are so many unregistered *Okada* riders. Thus, youth involve in the *Okada* riding business in Makurdi metropolis earn about N22,000 averagely in a month, which is very low considering that they will have to expend on their basic needs.

Reports on the basic expenditure (food, fuel and repairs on Machine) of the respondent showed that; 110 of the respondents representing 38.3% spend N5, 000 – N10, 000 averagely on food monthly. For this group, it is all evident that respondents do not eat three square meals a day if they had to spend N200 per day. Majority of the respondents 152(53%) of which 100 are hired Okada riders and 52 are owners, spend N11,000 - N20,000 on food averagely in a month. This means that the respondents only eat two time a day if they spent N200 per day. However, no respondent could afford to spend N30,000 on food, indicating that most Okada rider eat averagely one meal every day if a plate of food was sold for N200. Other expenditure includes; repair on the motor cycle and on fuel. Majority of the respondents expended about N3000-N4, 000 averagely on repairs and N11, 000 - N15, 000 averagely on fuel in a month respectively. The total average expenditure therefore amounted to about N19, 000. Comparing this amount to the total average income of about N22, 000, the take home income is negligible.

On the savings,136 respondents, of which 72 are Okada owners and 64 hired *Okada* riders, save N0.000 – N10,000 every month, 95 respondents save N11,000 – N20,000 every month. Only 34 respondents save above N20,000.   The result therefore shows that the owner operators are better off on the average than the hired operator riders because the owners earned income from their labour and from their capital invested. They also indicated that the take-home income from the *Okada* business do not satisfactorily take care of their basic needs implying that the *Okada* business is not profitable. If the *Okada* riders lack basic necessity (food and fund for repairs) to run *Okada* business, it is therefore difficult for them to fund the other basic necessities such as; clothing, shelter, school fees for those who are parents? Although the Okada business is a readily available job that youth in Makurdi metropolis easily engage themselves with, the business is not sustainable and therefore not profitable. Thus, graduates who are involved in *Okada* riding business are highly underemployed and are faced with absolute poverty. The study agreed with O'Connor, (1991) who said poverty can be conceptualised as a condition in which an individual or household is unable to meet the basic needs in life considered as minimum requirements to sustain livelihood in the given society, and UNDP (1997), which conceptualised poverty as the inability to creative life, and enjoy a decent standard of living, freedom, dignity, self-respect and the respect of others.   It is obvious then that they are dependent on other sources for their livelihood, an area for further investigation.

The study also examined the relationship and the degree of correlation within the opinions of the respondents using Chi square and Spearman correlation analytical tools. To examine the degree of association between respondent's income and their economic wellbeing, the study employed Spearman correlation as shown in table 5 and Chi square in table 6.

Table 5:   Spearman correlation

Variables	Ave. income	Take Home	Dependent	Reasons	Nature
Ave. income	1.000				
Take Home	0.0730	1.000			
	(0.2235)				
Dependent	0.1070*	-0.0411	1.000		
	(0.0772)	(0.4970)			
Reasons	0.0637	-0.1027*	-0.0492	1.000	
	(0.2929)	(0.0842)	(0.4139)		
Nature	0.0179	0.1707***	0.0245	-0.4505***	1.000
	(0.7653)	(0.0041)	(0.6855)	(0.000)	

Source: Author's compilation.   Note: (.) are probability values. * and *** means significant at 10 and 1 percent respectively.

The results in table 5is the Spearman correlation showing the degree of relationship of average income from *Okada* business, take-home income, dependence on relations, reasons for engaging in the business and nature of business. The result shows that the correlation between take- home income and the average income from *Okada* business is weak (0.073) and insignificant. This implies that the average income has no reflection on the take home and thus not sufficient and most of the youth riding *Okada* are not satisfied with the business. The relationship between dependency and average income is 0.107 and for take home pay is -0.0411. The result clearly shows that while the correlation between dependency and average income may be low; it is significant implying that youth who engaged in *Okada* business are dependent on relations and friends and other sources of income to supplement the income from Okada riding. Furthermore, the relationship between reason for joining *Okada* business and their take home income shows significant. This implies that the *Okada* business is borne out of necessity; they must be found doing something to help in their living. Thus even if they earn little income, they still remain in the business. The result also shows that the nature of respondents in the *Okada* business and their take-home income is 0.1707 and significant. This implies that the respondents' engagement status affects the amount of their take home income. Those who operate full time earn more. By implication the income of *Okada* riders depends on the effort put in the *Okada* business. In addition, there is a negative and significant relationship between respondents' status in *Okada* business and reasons for doing the business implying that *Okada* riders are affected equally. All of them suffer hazards, experience low self-esteem, deprivation, frustration and acute want. Adebayo (2013) asserts that this kind of condition in the youth leads them to deviant behaviours like crime in the society.

Table 6: Summary of Pearson Chi Analysis of likelihood to Commit Crime

		Ave. income	Take Home	Dependent	Ownership
Chis	Square	13.64	9.96**	1.0091	8.58*
Stats		(0.626)	(0.041)	(0.908)	(0.072)

Source: Author's compilation.Note: (.) are probability values. * and ** means significant at 10 and 5percent respectively. The degree of freedom for Ave. income chi square is 16 while the degree of freedom for the other three variables is 4. The critical values of chi square at 4 and 16 degrees of freedom at 5 percent is 8.49 and 26.29 respectively.

The result in table 6 is the chi square analysis of the relationship between average income, take home income, dependency, ownership of motorcycle and tendency to commit crime. The chi square value of 9.96shows that the relationship between the take-home income from *Okada* business and the tendency to commit crime among *Okada* riders is significant at 5 percent. What this implies is that *Okada* riders

become prone to committing crime when take home income is low. The result also indicates that there is a significant relationship between ownership of *Okada* and the tendency to commit crime with a chi square value of 8.58. In addition, the result in table 6 shows that *Okada* riders commit crimes because their take home income is not enough. By implication, those *Okada* riders who hire motorcycle for business have high tendency to commit crime because they are often worse off after making payment for the hired motorcycle. Table 6 also shows that there is no relationship between the tendency for *Okada* riders to commit crime and dependency level.

The outcome of this study stressed the need to provide stable employment that offers sustainable income to youths. This is because the tendencies for youth to commit crime increases when income is low or when the income generating jobs are not satisfactory. The case of the majority of the youths engaged in *Okada* riding as a means of employment in Makurdi metropolis is a situation of underemployment. Most of the respondents especially those with university degrees still complain that they are forced to pick up the *Okada* riding business because of lack of other job opportunities.

SUMMARY AND CONCLUSION

The finding of this exploratory study has brought out some policy implications for further research. Although   *Okada* riding is the most readily available job for the majority of Nigerian youth, who would have otherwise remained redundant, this study has shown that *Okada* business depicts the highest form of helplessness for jobless youth and a mark of youth poverty especially among the graduate of Universities and polytechnics. Most of these youth since graduation have not had any meaningful job. From the response of some of the youth in this research, they have been in the *Okada* business for more than five years and more youths are joining the business every day. With the number of youths in the business, the business is so saturated that they can hardly make any substantial amount of money that can sustain them and their family. This means that despite the daily work embarked by youths engaged in Okada business, their take home could not provide good food, potable water, shelter (house rent), and clothes, basic education for their families, an indication of abject poverty. The take home income cannot sustain them and all of them suffer or experience low self-esteem, deprivation, frustration and acute want. Their energies are usually misdirected or channelled into wrong endeavours such as touts on roving motorcycles and different social vices. The federal government must go on a rescue mission to eliminate poverty among the youth for their wellbeing and

for the sustainability of the economy. Considering the economic importance of the *Okada* business to many *Okada* riders, though, most of which are on the brink with poverty, the business helps in its own little capacity, at least taking the youth off the street and providing little for the upkeep of their families, the state government should legitimately incorporate *Okada* business into the transportation sector. The *Okada* rider can be used in transacting corporate businesses like courier services and protocol services. The *Okada* riding business can be fixed into department of some security agencies for movement, investigation, intelligence gathering or for carrying massages from place to another. Also, the nature of their job has been shown to be risky, given the rate of accident and road hazard. Since majority of *Okada* riders in Makurdi metropolis are literate, safety education will be a lot easier. The state and the federal government must therefore enforce rigorous regulation about licencing requirements for the *Okada* riders to ensure that only those certified to use the road are allowed to ply the trade. In addition, an insurance scheme should be provided for the *Okada* riders to aid in the full financial risk bearing repairs and / or hospital bills if in accident since many of them often get involve in accident. The state government should also try as much as possible to fix the deplorable roads in the state so as to ease vehicular movement. This will help in the great deal to reduce accident especially by the Okada rider.

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CORRELATION BETWEEN URBANIZATION, UNEMPLOYMENT AND POVERTY INCIDENCE IN NIGERIA

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Abstract

The surge of urbanization in Nigeria like most developing nations have come too rapidly and faster than available financial and human resources to manage them. This research work attempts to examine the existing challenges, and predict future challenges of the relationship between urbanization, poverty incidence and unemployment in Nigeria, while suggesting measures to greatly minimize the challenges in order to ensure sustainable developments in both the Nigerian urban centres and rural areas. The study employed time series data ranging from 1981 to 2015 using multiple regression model and FGT index to investigate the relationship between urbanization, poverty and unemployment in Nigeria. Unemployment was statistically significant and has inverse relationship with urbanization. From the GINI index, the study found that poverty incidence is a significant factor affecting urbanization with wide spread inequality. Also, unemployment was found to be statistically significant and has inverse relationship with economic growth in Nigeria. Considering the multifarious problems associated with urbanization (majorly unemployment and poverty), the study suggests that government should open social welfare scheme to tackle the problem of hunger, destitution and joblessness.

1. INTRODUCTION

Spurred by the oil boom prosperity of the 1970s and the massive improvements in roads and the availability of vehicles, Nigeria since independence has become an increasingly urbanized and urban-oriented society. During the 1970s Nigeria had possibly the fastest urbanization growth rate in the world (Oluwemimo, 2007). Because of the great influx of people into urban areas, the growth rate of urban population in Nigeria in 1986 was estimated to be close to 6 percent per year, more than twice that of the rural population (Agbola, 2004). Between 1970 and 1980, the proportion of Nigerians living in urban areas was estimated to have grown from 16 to more than 20 percent, and by 2010, urban population was expected to be more than 40 percent of the nation's total (CIA World Factbook, 2016). Although Nigeria did

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not have the highest proportion of urban population in sub-Saharan Africa (in several of the countries of francophone Central Africa, for example, close to 50 percent of the population was in the major city or cities), it had more large cities and the highest total urban population of any sub-Saharan African country (CIA World Factbook, 2016).

In 1990 there were twenty-one state capitals in Nigeria, each estimated to have more than 100,000 inhabitants; fifteen of these, plus a number of other cities, probably had populations exceeding 200,000 (National Population Commission of Nigeria, 2004). Virtually all of these were growing at a rate that doubled their size every fifteen years. These statistics did not include the new national capital, Abuja, which was planned to have more than 1 million inhabitants by twenty-first century, although that milestone might be delayed as construction there stretched out. If one adds the hundreds of smaller towns with more than 20,000 inhabitants, which are larger centers, the extent of Nigerian urbanization was probably more widespread than anywhere else in sub-Saharan Africa (National Bureau of Statistics, (NBS), (2002).

The most disreputable example of urban growth in Nigeria has undoubtedly been Lagos, its most important commercial center. Aside from Lagos, the most rapid recent rates of urbanization in the 1980s were around Port Harcourt in the Niger Delta region, which was at the heart of the oil boom, and generally throughout the Igbo and other areas of the southeast. These regions historically had few urban centers, but numerous large cities, including Onitsha, Owerri, Enugu, Aba, and Calabar, grew very rapidly as commercial and administrative centers. The Yoruba southwest was by 1990 still the most highly urbanized part of the country, while the middle belt was the least urbanized. The problems of Lagos, as well as the desire for a more centrally located capital that would be more of a force for national unity, led to the designation in 1976 of a site for a new national capital at Abuja (Aluko, 2010).

Thus, urbanization process in the developed countries is as a result of rapid development, modernization and industrialization, and not agglomeration of people which usually results from rural-urban drift. While the urbanization in Nigeria like most other developing nations, is a consequence of the "push" of the rural areas and the "pull" of the urban centres (Aluko, 2010). The push and pull in this regard are with respect to the population, which can be traced to the effects of regional imbalances.

Unemployment is widespread in Nigeria urban areas. Migrants constitute a significant proportion of the urban poor and the unemployed in Nigeria. Migration is a significant contributor to urbanization, as people move in search of social and economic opportunity (United Nations Fund for Population Activities (UNFPA), 2011). A key determinant of migration is the income differential between rural and urban regions (Gilbert and Gurgler, 1992). It is also influenced by other factors related to individual or household's structure and survival strategies and wider political, economic and social forces (United Nations Centre for Human Settlements (UNCHS), 1995).

Poverty is a plaque afflicting people all over the world. It is considered one of the symptoms or manifestations of underemployment (World Bank, 2009). In Nigeria, poverty is concentrated among unemployed youth, small households, household headed by an informal sector workers, women and elderly person without social safety nets (Federal Office of Statistics (FOS), 1999). Aregboshola (2008), saw unemployed youth to include not only unemployed graduates, but also other cadre such as the secondary school dropouts and school leavers. He further stressed that, vocational training centers which were meant to cater for this set of youth are non-existent.

The rising profile of poverty in Nigeria is assuming a worrisome dimension as empirical studies have shown. Nigeria, a sub-Saharan African country, has at least half of its population living in abject poverty (National Bureau of Statistics (NBS), 2006). However, Rachael, (1997), in Wratten (1995) states that, justification for using income as proxy for welfare is that, it is largely correlated with other causes of poverty and is a predicator of future problems and deprivation.

The scourge of poverty in Nigeria is an incontrovertible fact, which results in hunger, ignorance, malnutrition, disease, unemployment, poor access to credit facilities, and low life expectancy as well as a general level of human hopelessness (Abiola and Olaopa, 2008). Nigeria is richly endowed and the country's wealth potentials manifest in the forms of natural, geographical and socioeconomic factors (Omotola, 2008). With this condition, Nigeria should rank among the richest countries of the world that should have no business with extreme poverty. Nigeria has witnessed a monumental increase in the level of poverty (Okpe and Abu, 2009). According to them, the poverty level stood at 74.2 percent in the year 2000.Looking at the records, it revealed that about 15 percent of the population was poor in 1960; the figure rose to 28 percent in 1980 and, by 1996, the incidence of poverty in Nigeria was 66 percent or 76.6 million people (FOS, 1999). The United Nations Human Poverty Index in

2009 placed Nigeria among the 25 poorest nations in the world. The population in poverty is given as 68.7 million as of 2004 (United Nations Development Programme (UNDP), 2010).

The economy of the country in which urbanization is taking place has been described as stagnant and the growth of industrialization is negligible (Salau, 1992). The implications of rapid urbanization in Nigeria on unemployment, human and food security, economy, waste management, infrastructural facilities and services inter alia are alarming. Against this background, the study is poised to unravel the following research questions. 1. What is the relationship between urbanization and unemployment in Nigeria? 2. Does urbanization has any effect on poverty incidence in Nigeria? 3. What is the impact of urbanization on economic growth in Nigeria? However, the broad objective of this research is to examine the relationship between urbanization, unemployment and poverty incidence in Nigeria.

2. LITERATURE REVIEW

2.1 Theoretical Literature Review

2.1.1 The Harris-Todaro Model of Migration and Unemployment

The Harris-Todaro (H-T) model is based on the experiences of tropical Africa facing the problems of rural-urban migration and urban unemployment. The theory is of the opinion that labour migration is due to rural-urban differences in average expected wages. The minimum urban wage is substantially higher than the rural wage. Hence, if more employment opportunities are created in the urban sector at the minimum wage, the expected wage shall tend to rise and rural-urban migration shall be induced leading to growing levels of urban unemployment. For this reason, to remove urban unemployment, Harris and Todaro suggest a subsidized minimum wage through a lump sum tax.

Nonetheless, this theory is based so on many assumptions, as seen in Jhingan (2012), such as: (i) Rural-urban migration will continue so long as the expected urban real income is more than the real agricultural income. (ii) The number of urban jobs available (NM) is exogenously fixed. In the rural sector, some works are always available.

2.2 Empirical Literature Review

There have been several researches on unemployment and its causes in developing countries, especially Nigeria. Scholars have identified the following as the major causes of unemployment in Nigeria as well as other developing countries; neglect of agricultural sector, rural-urban migration, wrong impression about technical or vocational education or training, corruption with its attendant grave embezzlement, rapid population growth, low economic growth and activities, low investment, leadership and managerial problem, lack of political will, outdated school curriculum making Nigerian graduates unemployable, poverty, lack of adequate youth development programmes, increase in the supply of educated manpower as a result of producing more graduates than available jobs and more painfully, the gradual collapse of manufacturing sector (Adesina, 2013; Salami, 2013; Nwanguma, et al. 2012; Adebayo, 1999; Alanana, 2003; Echebiri, 2005; Ayinde, 2008; Morphy, 2008; Awogbenle & Iwuamadi, 2010; Okeke, 2011; Njoku & Ihugba, 2011 and Anyadike, et al. 2012). Some of these studies were purely empirical so the situation is a mirror of the now in the Nigerian society. These related factors contribute to low job creation and because of increasing population growth, the small labour market is unable to absorb the resulting army of job seekers. This is further aggravated by the lack of infrastructural facilities, which makes the rural life unattractive making youths to move to urban areas with the probability of securing lucrative employment in the industries and to enjoy the available social amenities. Salami (2013) emphasized lack of political will, especially in fighting hard against corruption and enforcing vocational and technical education as very germane to increase in unemployment rate in Nigeria.

Finally, it is pertinent to mention that most of the studies conducted have shown that urbanization and urban unemployment have a serious negative impact in the sustainability of growthof the country. It must be said that Nigeria could also account for the negative impact too. Notwithstanding, the fact that none of the studies in our literature, have used *Harris-Todaro model of migration and unemployment* to prove their result have made this paper more relevant. Specifically, the studies reviewed were either on unemployment, poverty, urbanization, unemployment and poverty, unemployment and urbanization, or poverty and urbanization. This study tries to investigate the three variables simultaneously in Nigeria using a modified Harris-Todaro model of migration and unemployment.

3. METHODOLOGY AND DATA

3.1 Methodological Framework

The study would employ multiple regression model alongside the Foster, Greer and Thorbecke (FGT) index as well as some descriptive analysis to attain the stated objectives. To ascertain objectives one and three, the study would employ multiple regression model while objective two would be addressed using the Foster, Greer and Thorbecke (1984) widely known as the FGT poverty measurement technique. The FGT index is the most widely used measure of poverty and highly recommended due to its flexibility in measuring poverty at different degrees and sub sectors.

3.2 Definition of Variables

UBPOP = Urban population (proxy for urbanization),   UNEMP = Unemployment rate, PCINC = Per Capita income, EDXP = Education expenditure, HEXP = Health expenditure, RGDP = Real Gross Domestic Product

3.3 The model

Model 1. Model 1 expresses urban population as a function of unemployment rate, per capita income, education expenditure and health expenditure to capture objective 1.

The functional form of the model is specified as:

UBPOP = F(UNEMP, PCINC, EDXP, HEXP) …………….................…(3.1)

Model 1 is specified econometrically as:

$UBPOP_t = \beta_0 + \beta_1 UNEMP_t + \beta_2 PCINC_t + \beta_3 EDXP_t + \beta_4 HEXP_t + \mu_{1t}$…….. (3.2)

where, PCINC, EDXP and HEXP are control variables for model 1.

Model 2

The FGT index for objective 2 is given as:

$$P \approx \frac{1}{N} \sum_{i=1}^{q} \left(\frac{z - yi}{z}\right)^{\alpha} \quad …………………………… (3.3)$$

Where $y_i = (y_1, y_2, \ldots, y_n)$ which represents the income vector of a population of n individuals with incomes sorted in increasing order of magnitude. z is the poverty line, q is the number of poor individuals, N is the total number of individuals in the population under study, α is a weighting parameter that can be viewed as a measure of poverty aversion and is the most significant because it is the index that makes this formula differ in measuring headcount, poverty gap and the severity of poverty. The FGT index takes on the values 0, 1 and 2 for headcount, poverty gap and severity. If α = 0 the FGT index reduces to the poverty head count ratio (i.e., the percentage of poor in the sample). The head count index is advantageous in that it is simple to construct and easy to understand.

Model 3

Model 3 expresses real gross domestic product as a function of urban population, unemployment rate and per capita income to address objective 3.

The functional form of the model is specified as:

RGDP = F(UBPOP, UNEMP, PCINC) ……………………………...……… (3.4)

The model is specified econometrically as:

$RGDP_t = \psi_0 + \psi_1 UBPOP_t + \psi_2 UNEMP_t + \psi_3 PCINC_t + ?_{1t}$…………………… (3.5)

Where UNEMP and PCINC are control variables for model 3.

The assumption in the equations above is that all the variables exhibit a mean reversing property of stationarity. In practice, most economic series are attuned to time with a non-reversing mean. If the variables are not stationary at level, they shall be differenced by employing Augmented Dickey-Fuller (ADF) test to ensure that the variables attain stationarity. The study shall therefore estimate the following equation:

$\Delta Y_t = (Y_t - Y_{t-1}) = \mu_t$…………………………………………...……….……… (3.6)

This is simple enough, to ensure that the variables attain stationarity, all the study needs to do is to take the first difference of the variables if they are not stationary at level form and regress them on their lags. Where Y is a vector of all the variables and μ_t is a white noise error term. Against this backdrop, models 1 and 3 are restated as follows:

Model 1

$$\Delta UBPOP_t = \beta_0 + \beta_1 \Delta UNEMP_t + \beta_2 \Delta PCINC_t + \beta_3 \Delta EDXP_t + \beta_4 \Delta HEXP_t + \mu_{2t} \dots\dots (3.7)$$

Model 3

$$\Delta RGDP_t = \psi_0 + \psi_1 \Delta UBPOP_t + \psi_2 \Delta UNEMP_t + \psi_3 \Delta PCINC_t + ?_{2t} \dots\dots\dots\dots\dots (3.8)$$

Co integrated equation

The cointegrated equation for model 1 and 3 is stated as:

$$\left[\eta_m \log Y_t = \alpha_0 + \sum_{i=1}^{p} \alpha_i \eta_m Z_i - \left[\eta_m \log Y_t - \sum_{i=1}^{p} \beta X_{i-1} + \nu_{1t} \right] \right] \quad \dots\dots\dots\dots (3.9)$$

Where

$[\ \eta_m \log Y_t - \sum_{i-1} \beta X_{t-i}\ ]$ is the linear combination of the co-integrated vectors,

X is a vector of the co-integrated variables.

The presence of unit root and co-integration is the necessary and sufficient condition for an error correction mechanism.

The Error Correction Model equation

If equation 3.9 is true, then the individual influence of the co integrated variables cannot be separated unless with an error correction mechanism through and error correction model.

$$\left[\eta_m \log Y_t = \alpha_0 + \sum_{i=1}^{p} \alpha_i \eta_m Z_i - \lambda ECM_{i-1} + \nu_{2t} \right] \quad \dots\dots\dots\dots\dots\dots\dots (3.10)$$

Where $-\boldsymbol{\lambda ecm}$ is the error correction mechanism, $-\boldsymbol{\lambda}$ is the magnitude of error corrected each period specified in it's a priori form so as to restore $\eta_m \log Y_t$ to equilibrium.

3.4 Estimation Procedure

Owing to the nature of our macroeconomic variables, the multiple regression model becomes apt to use. Most macroeconomic variables exhibit volatility clustering and may be cointegrated with the regressand. Thus, there is need to model our series to

reflect such properties. The multiple regression model is flexible and comes in handy, especially at our level. The change coefficient ensures that the regressors attain stationarity and can easily be estimated by OLS. The OLS technique is relatively easy to use and there are readily available software packages for use.

3.5 Data sources

Data for this study were sourced from the Central Bank of Nigeria (CBN) statistical Bulletins and World Bank Development Indicator database from 1980 to 2017. While, EView 9.0 was employed for model 1 and 3, STATA 12 econometric software was used to estimate model 2.

4. RESULTS AND DISCUSSION

4.1 Pre-estimation Test

4.1.1: Stationarity test

Table 4.1: Order of Integration (Stationarity test)

Variables	ADF Statistics	Integrated of order 1 (1) Mackinnon Critical value 5%	Intercept	Trend	Lag
RGDP	**3.429963**	-2.9591	YES	NO	1
UNEMP	**--4.846451**	-2.9591	YES	NO	1
PCINC	**2.835483**	-1.9526	NO	NO	2
EDXP	3.184263	**-2.9558**	YES	NO	1
HEXP	- 4.118711	-2.9591	YES	NO	1

From the table above, the study can infer that all the variables are stationary after taking their first difference. However, all the variables have significant intercepts except per capita income (PCINC) while none of the variables has significant trend. All the variables were stationary at lag 1, except for PCINC that is stationary at lag 2.

4.1.2 The Normality Test Result

The result of the normality test suggests that the regression result is normally distributed since the computed Jarque-Bera (0.476227) is less than the tabulated Jarque-Bera (5.99) at 5% level of significance, see figure 4.1 below.
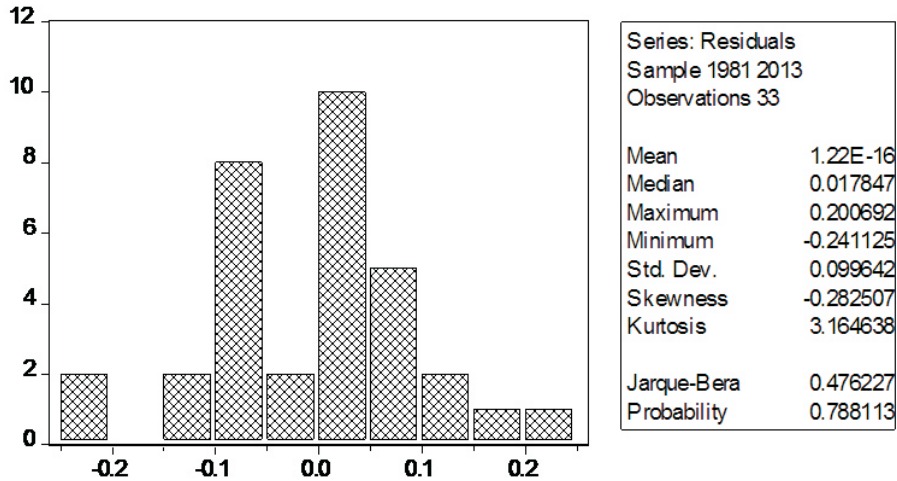
Figure 4.1: Normality test result

4.1.3: Heteroscedasticity

Table 4.2 Heteroscedasticity test result

Included observation: 33

White Heteroskedasticity Test:

F-statistic	4.050794	Probability	0.003614
Obs*R-squared	9.059028	Probability	0.015080
R-squared	0.274516		

Since the computed Obs*R-squared is less than the critical Chi-square (14.0671) at 5% level of significance, the study concludes that there is no heteroscedasticity in the model result.

4.1.4 Multicollinearity

Table 4.3 Multicollinearity test result

	UNEMP	PCINC	EDXP	HEXP
UNEMP	1.000000	0.002329	-0.033479	-0.033541
PCINC	0.002329	1.000000	0.481730	0.481151
EDXP	-0.033479	0.481730	1.000000	1.000000
HEXP	-0.033541	0.481151	1.000000	1.000000

Results show that there is no multicollinearity among the explanatory variables except for education and healthcare expenditures where the study observed perfect linear relationship among the two control variables.

4.1.5 Ramsey RESET

Table 4.4: Ramsey RESET Test:

F-statistic	1.204478	Probability	0.001127
Log likelihood ratio	19.96561	Probability	0.000173

Since the computed F-value is insignificant at 5% level of significance the study rejects the null hypothesis that the model is mis-specified.

4.2 Presentation of results

4.2.1 Relationship between urbanization and unemployment in Nigeria

Table 4.5: The relationship between urbanization and unemployment in Nigeria after unit root test

Using OLS

Dependent variable: Urbanization

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.009014	1.291127	0.006981	0.9945
LOG(D(UNEMP))	0.465362	0.155973	2.983606	0.0039
LOG(D(PCINC))	0.042394	0.057630	0.735618	0.4681
LOG(D(EDXP))	2.209220	0.564823	3.911349	0.0005
LOG(D(HEXP))	2.060607	0.531281	3.878561	0.0006
R-squared	0.752687			

After taking the first difference and rates of the variables in the model, results show that unemployment has a positive relationship with urbanization and very significant. This implies that if unemployment increases by 1%, urbanization will increase by about 47%. This shows that there is rural-urban drift in Nigeria as a result of unemployment. This result corroborates with earlier findings by (Onyemelukwe, 1977; Agbola, 2004; Olotuah and Adesiji, 2005).

Control variables like education expenditure (EDXP) and health expenditure (HEXP) have statistically significant relationship with urbanization. Thus if EDXP and HEXP increase by 1%, urbanization will increase by 202% and 201% respectively. However, per capita income was found to have insignificant relationship with urbanization. The value of the R-squared shows that the

explanatory variables explained the variation in urbanization to the tune of 75% compared to 88% when the variables were non-stationary.

However, the above result appears technically not efficient since OLS method of estimation cannot work with this type of ADF test. The author has sought for a superior technique that can work when OLS assumptions break down. Thus, the study employed generalized linear models technique which uses Newton-Raphson / Marquardt steps.

Table 4.6: The relationship between urbanization and unemployment in Nigeria Using generalized linear models (Newton-Raphson / Marquardt steps)

Dependent variable: Urbanization
Coefficient covariance computed using observed Hessian

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.647462	0.300498	-2.154632	0.0312
LOG(D(UNEMP))	0.439227	0.151938	2.890823	0.0038
LOG(D(PCINC))	-0.083757	0.013477	-6.214870	0.0000
LOG(D(EDXP))	0.248481	0.157740	1.575251	0.1152
LOG(D(HEXP))	-0.239982	0.147781	-1.623902	0.1044
LOG(D(RGDP))	0.578215	0.025990	22.24726	0.0000

With Newton-Raphson/Marquardt steps, the result still suggests that increase in unemployment could lead to urban influx. In specifics, the result reveals that a percentage increase in unemployment could lead to 44 percent surge in urbanization. Interestingly, there is evidence that a reduction in poverty (increase in per capita income) could lead to a reduction in rural-urban drift. More so, increase in economic growth is observed to be positively associated with urbanization. Thus, a percentage increase in economic performance of the Nigerian economy would lead to 58 percent urbanization. This is in line with the findings by (Gilbert and Gular, 1992), Kessides, (2005), and Ajakaiye and Adeyeye (2010).

4.2.2: The effect of urbanization on poverty incidence in Nigeria

The result of the disaggregated FGT index is as shown below.

GINI coefficients of selected years are:

1985 = 38.7, 1992 = 45, 1996 = 51.9, 2003 = 40.1, 2009 = 43

The GINI results show that poverty incidence due to urbanization was least in 1985 and highest in 1996. This implies that uneven distribution of income widened most in the urban areas in 1996. However, poverty incidence in 1992, 2003 and 2009 were less severe.

Urban poverty gap at national poverty lines (selected years) (%)

2003 = 13.7%, 2009 = 11.6%

Urban poverty output gap shows that the gap is closing down gradually from 13.7% in 2003 to 11.6% in 2009.

Annualized average growth rate in per capita real survey mean consumption or income, bottom 40% of population (%) 2009 = 0.1%. This shows that poverty is relatively endemic in Nigeria given that the growth rate of per capita income is very low. People would be trap below the poverty line for a longer time.

Poverty headcount ratio at national poverty lines (% of population)

2003 = 48.4,   2009 = 46

4.3 Diagnostic tests

4.3.1: Johansen-Juselius (JJ) Cointegration

Table 4.7. Cointegration test (JJ) result

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.615414	86.76765	69.81889	0.0012
At most 1 *	0.585423	57.14444	47.85613	0.0053
At most 2 *	0.433861	29.84904	29.79707	0.0493
At most 3	0.297428	12.21268	15.49471	0.1470
At most 4	0.040123	1.269468	3.841466	0.2599

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

The JJ test follows the trace statistic distribution. The unrestricted cointegration rank test (trace) result suggests that there are three cointegrating equations in the model. Hence, the study infers that there is a long run relationship among the explanatory variables.

Table 4.8. Cointegration test (ADF) result

ADF Test Statistic	-2.707983			1% Critical Value*	-2.6369
				5% Critical Value	-1.9517
				10% Critical Value	-1.6213

*MacKinnon critical values for rejection of hypothesis of a unit root.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COINTEGRATION	-0.353870	0.130677	-2.707983	0.0109

Result from the augmented Dickey-Fuller also suggests that there is a long relationship among the variables since the ADF test statistic is greater than the critical values both at 1%, 5% and 10%.

4.9. The Error Correction Mechanism

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECM(-1)	-0.796981	0.136102	-5.855754	0.0000

The ECM result shows that the speed of adjustment of the short-run discrepancies is about 80% and very significant. This implies that in the next one year, errors in the short-run model would be corrected to the tune of 80%.

4.3 The impact of urbanization on economic growth in Nigeria

Table 4.10: Urbanization and economic growth in Nigeria

Dependent Variable: LOG(RGDP)

Convergence achieved after 0 iterations
Coefficient covariance computed using observed Hessian

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	1.013929	0.525343	1.930034	0.0536
LOG(UBPOP)	1.621107	0.061409	26.39845	0.0000
LOG(UNEMP)	-0.770681	0.268086	-2.874754	0.0040
LOG(PCINC)	0.134855	0.013807	9.767427	0.0000

The result of table 4.10 shows that urbanization coefficient is positive and statistically highly significant. The coefficient value reflects that if urbanization increases by 1%, economic growth would increase by about 106%. This is not surprising given that increase in urban population would directly and indirectly increase the level of productivity. The same outcome was found by Tokunbo, (2005),

Aregbeshola, (2008), and Aye–aye and Adeyeye, (20l0). The control variables in the result also conform to apriori expectation. The coefficient values of unemployment and per capita income suggest that 1% increase would cause a decrease in economic growth to about 77% and an increase of about 13% respectively.

Figure 4.2: Urbanization, poverty, unemployment and economic growth in Nigeria
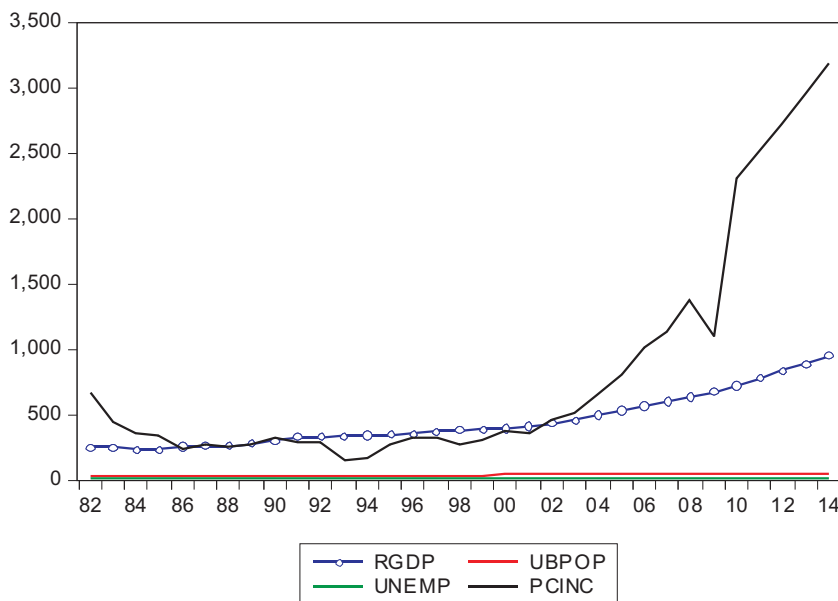
The figure suggests that economic growth in Nigeria is not pro-poor since unemployment has been on the increase as economic growth increases. Furthermore, the figure further reveals that economic growth in Nigeria is not pro-urbanization

5. POLICY RECOMMENDATIONS AND CONCLUSION

5.1 POLICY RECOMMENDATIONS

Urbanization, poverty incidence and unemployment in Nigeria have brought about varying degrees of problems ranging from economy, climatic, environmental, housing, socio-cultural, traffic, population bomb, to food insecurity among other problems. It is good to know that everyone in Nigeria is affected with one or more of these problems, which shows that we are not safe from the existing and predicted

problems. It is pertinent at this point for Nigerian government to adopt the recommendations below for policy, in order to control poverty incidence, unemployment, the urbanization process in Nigeria, and to ensure sustainable developments in both urban centres and rural areas.

- ✓ The poverty eradication schemes set up by the governments are being used by those in charge of the programmes to settle their political thugs and clients. Corruption must be stamped out ruthlessly. Loans to small scale entrepreneurs and farmers should be interest-free and applicants must be made to submit realizable business proposals in order to benefit from the loans.

- ✓ The major factor that leads to rural-urban drift (urbanization) in Nigeria is regional inequalities as observed from the GINI coefficients. To halt rural-urban drift to a great extent, government at the state (regional) level supported at the federal (national) level, should embark on various physical developments and the provision of basic infrastructural facilities, services and social amenities (equipped schools, water supply, good roads, health facilities, stable electricity, relaxation centres and other things) in rural areas. This will reduce the level of inequalities between the urban centres and rural areas, and this will naturally control the rural-urban drift. Also, to solve the problem of massive migration to urban cities, there is the need for youth empowerment. Necessary provisions should be made for the education of youths in technical and vocational works for them to be self-reliant and self-employed.

- ✓ There is need for improvement in enhancement of human capital through trough training in life skills and vocations which would help stimulate the innate entrepreneurial potentials of the people and expand their income generating capacities and become more productive. Also, more enlightenment programs should be available for the members of the public on the implications of natural increase. The awareness should start from the religion centres, community and media.

- ✓ That there should be a paradigm shift in the bias of our educational system with a view to making Nigerian youths imbibe the philosophy of self-employment and entrepreneurship through inclusion of vocational and entrepreneurial training and the inclusion of entrepreneurial development programmes into our school curricula. Students on graduation can use their

certificates to obtain loans for businesses from the entrepreneurial loan schemes. That more research should be carried out on the attitudes of unemployed people towards government's policies and programmes of poverty and unemployment reduction in Nigeria; to desensitize the unemployed of their aggressive tendency and alter their perceptions of reality.

5.2 CONCLUSION

The surge of urbanization and unemployment in Nigeria like most developing nations have come too rapidly and faster than available financial and human resources to manage them. Whereas urbanization in the industrialized countries took many decades, permitting a gradual emergence of economic, social and political institutions to deal with problems of transformation, the process in developing countries is occurring far more rapidly, against a background of higher population growth, lower incomes, and fewer opportunities for international migration. The challenges posed by urbanization in Nigeria are many but not insurmountable. Tackling such challenges will require good knowledge of the characteristics of the people accessing the city as well as accurate projections of future urban growth.

This argument is brought to a point where we can conclude that the existence of the urbanization and unemployment in relation to poverty alleviation yields unsatisfactory returns to the Nigerian economy. Hence, the Nigerian government need to make hay while the sun shine by empowering the young people through the creation of job opportunities in agricultural sectors in rural areas for sustainability, instead of allowing them to migrate to the urban areas in search of work which does not exist, thereby causing problems to themselves and to the entire country.

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ANALYSIS OF SOCIO-ECONOMIC DETERMINANTS OF RURAL WOMEN'S ENTREPRENEURIAL INTENTION FOR ECONOMIC RECOVERY OF KOGI STATE

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Abstract

This study aimed at analyzing the socio-economic factors determining the rural women's entrepreneurial intention for the economic recovery of Kogi State. For this purpose, research survey design and purposive sampling method was adopted. Data collected were analyzed using descriptive and multiple regressions. Finding shows that factors such as guaranteed credit scheme, viable social network, entrepreneurial assistance and social group support are critical determinants of the rural women's entrepreneurial intention for the economic recovery of Kogi State.The study concluded that there is no way the economic recovery of Kogi State can be facilitated without due attention on socio-economic factors. The study recommends that socio-economic factors should be taken into consideration in the economic policy of Kogi State as it can boost the entrepreneurial intentions and decision of rural women. For instance, young, married, educated and vibrant rural women should be given more preference in the social investment scheme or other entrepreneurial intervention programmes in Kogi State.

Keywords: Entrepreneurial Intentions, Socio-Economic Factors, Social Network, Entrepreneurial Assistance, Rural Women Entrepreneurship

INTRODUCTION

Though, there have been conceptual arguments (Schumpeter, 1947, Weber, 1948, McClelland, 1961) regarding socio-cultural factors as determinants of entrepreneurship for decades. Urban (2004) added that the results of empirical research also have been mixed in that regard. In Nigeria, socio-cultural factors are argued to be good determinants of entrepreneurship (Akpor-Robaro, 2012; Onodugo and Onodugo, 2015; Abdullahi and Zainol, 2016). The socio-cultural factors according to Valliere (2008) and Wu and Wu (2008) portend a lesser explored avenue

and are critical to providing promising solution to the problem at hand, which is the problem of poor entrepreneurship interests. Education, religion and family background have been proved by extant literature to be the most prominent dimensions of the socio-cultural business environment (Yeboah, 2014), but little attention was given to socio-economic factors affecting entrepreneurial intention in Kogi State.

Rural women play a major role in rural economy (Gülden and Türköz-Cosslett, 2012). Taylor (1988) acknowledges the potential of rural women entrepreneurs and their role in rural economy. They are believed to be cardinal in the economic recovery of Kogi State. Meanwhile, the entrepreneurial intention of rural women can be explained from distinct dimensions such as personal, cultural, sociological and economical factors. The personal factors have to do with self-reactiveness, self-reflectiveness and self-efficacy. Urban (2004) recognized these factors, and posited that efficacy beliefs affect performance both directly and by influencing intentions. However, socio-economic factors determining the entrepreneurial intentions of rural women need to be given focus in order to fasttrack the economic recovery of Kogi State. In addition, gender issue appears to be an unobserved challenge for the Kogi State economic recovery. Though, the popular belief is that women are traditionally and religiously posed with limitations. Apart from gender barrier on women, constraints on rural women entrepreneurs in this study are regarded as factors hindering their entrepreneurial intentions, and are likely to also cause the economic recovery of Kogi State to be unrealistic. These factors may include limited access to technology and credit constraint involving high cost of acquisition and information asymmetries and others according to researches are limited knowledge and skills in business management (Bruhn, Karlan and Schoar, 2012; Berge, Bjorvatn and Tungodden, 2011); inadequate supply of skilled workers (Quader and Abdullah, 2008; Ishengoma and Kappel, 2006); high cost of production (Ishengoma and Kappel, 2008; Skinner, 2005), regulatory barriers from city authorities, poor organization and lack of collective action among entrepreneurs (Osei, Mensah, Ohene-Yankyera and Aidoo, 2016). Studies have only focused on socio-cultural factors affecting the decision of women in entrepreneurship without considering socio-economic factors determining the entrepreneurial intention of women in Kogi State. This study is therefore conducted to bridge this gap. Hence, the main objective of the study is to analyze the socio-economic factors determining the rural women's entrepreneurial intention for the economic recovery of Kogi State.The specific objectives are to:

   I.   Describe the socio-economic characteristics of rural women in Kogi State.

ii. Find out the influence of socioeconomic factors on entrepreneurial intention in Kogi State.

LITERATURE REVIEW

There have been a number of literatures on rural women from which many issues have been discussed. If a comprehensive review of the literature is done, one would realize that rural women entrepreneurial activities can be classified or categorized in such a way that ensue proper understanding of rural entrepreneurship.

It is imperative to probe into women entrepreneurship for the purpose of this study. Abeh, Umar and Odekina (2015) stressed that women entrepreneurship is the process where women organize all the factors of production, undertake risks, and provide employment to others. The definition of women entrepreneurship has never been differentiated on the basis of sex and hence could be extended to women entrepreneurs without any restrictions (Allen, Minnit and Langouitz, 2006). Therefore, the consideration of the 'concept of rural' in women entrepreneurship leads to the derivation of the term 'rural women entrepreneurship'. Ocheni and Nwankwo (2012) explained that the word "rural" means different thing to different people; but the Federal Office of Statistics defines it as a community with less than 20,000 people. Meanwhile, women entrepreneurs are the female gender who undertake risk, channel resources, manage and control entrepreneurial activities in a profitable manner. Thus, a rural woman entrepreneur is one who finds out investment opportunities, starts business by undertaking risk, manages (plan, organize, direct and control) it independently and tactfully, faces constraints with perseverance and contribute to the economic growth of their society in a profitable manner.

According to Bandura (2001), an intention is a representation of a future course of action to be performed. Urban (2004) believed that it is not simply an expectation of future actions but a proactive commitment to bringing them about. Based on the position of these two authors, it is observed that plans and strategies follow intention, and the implementation of these is regarded as the action. Thus, entrepreneurial intentions are the outcome of successful plans and strategies directed towards entrepreneurial endeavor. Krueger (1993) defines entrepreneurial intentions as a commitment to starting a new business. This is quite too narrow and myopic due to the fact that entrepreneurial intentions are not limited to starting a new business alone, but can also mean:

i. Entrepreneurial intention in the growth and expansion aspect of the business

ii. Entrepreneurial intention in the diversification aspect of the business

iii. Entrepreneurial intention in the innovation and creativity aspect of the business

Urban (2004) accepted the view of Krueger as it is upheld that entrepreneurial intentions is a more encompassing concept than merely to own a business, and that the creation of a venture is central to the definition of entrepreneurship.

Factors Influencing Entrepreneurial Intention

Entrepreneurial intention may be influenced by many factors. Linan and Chen (2009) and Turker and Selcuk (2009) identified these factors in their works to be perceived educational support, perceived structural support, perceived behavioral control, personal attitude and perceived social group support. When these factors appear in individuals, there may be tendency to venture in new business or grow an existing one. It will be agreed that the abundance of these factors determines the degree to which entrepreneurial intention is established.

According to Ambad and Ag Damit (2016), perceived educational support has been recognized as a determinant of entrepreneurial intention. Education in the rural areas of Kogi State is always at appalling state. It is estimated that about 80% of the primary schools are located in the rural areas, but there were disparities similar to those experienced in other areas of education with regard to urban and rural schools, between boys and girls, and in the transition from junior secondary school to senior secondary schools, that favored boys (Moja, 2000). Researchers (Mumtaz et al., 2012; Turker and Selcuk, 2009) view education as a viable tool to enhancing the necessary entrepreneurial knowledge, skill and ability. Though, entrepreneurship education is evident to have been green-marketed in Nigeria, but less effort is asserted at the rural level. Peterman and Kennedy (2003) noted that entrepreneurship education is instrumental to entrepreneurial intention and action; thereby influencing strong career choice. Türker and Selçuk (2009) also buttressed that a research conducted previously put education to have positive impact on entrepreneurial intention. Türker and Selçuk (2009) argue that entrepreneurship education is resourceful for acquiring knowledge on entrepreneurship.

Social group in this study refers to members of the family, friends or peers. Supports from the members of this group are believed to be instrumental to entrepreneurial intention. Ambad *et al.* (2016) regarded to this kind of support as a relational support which Türker and Selçuk (2009) defined as approval and support from the family, friends and others to involve in entrepreneurial activities. Ambad *et al.* (2016)

expressed that family and friends are the persons that have a great influence on individual career choice because they are considered as fund providers and role models. Just as a result of the strong bond or relationship, the spirit of support both financial and otherwise is easily often readily available. This then states the inevitable role of friends and family in stimulating entrepreneurial intention and decisions of members who are lucky to belong to a group of wealthy or educated people. It is found in the literature that the role of friends and role models is prominent in influencing the decisions to become an entrepreneur (Nanda and Sorensen, 2009).

According to Ambad *et al.* (2016), structural support refers to the perceived entrepreneurial assistance from the economy, public and private and non-governmental agencies. Successive governments have focused on entrepreneurship development programs (EDP) and policies in higher institutions. The directorate has four programs viz. (i) Small-scale Industries and Graduate Employment Program, (ii) National Youth Employment and Vocational Skills Development Program, (iii) Agricultural sector Employment program, (iv) Special Public Works programs (Nigeria Rural Development Sector Strategy Main Report, 2004). These programs are directed to enhance the knowledge, skill, behavior and attitudes of individual and groups to assume the role of entrepreneurs. For the effective implementation of government programs and policies towards entrepreneurship and small business enterprises, various Nigerian governments have established some agencies and policies including: Various credit guidelines prescribed by government for loans and advances which banks should make available to Nigerian small business firms; National Directorate of Employment (NDE); Industrial Development Canters (IDC); National Economic Reconstruction (NERFUND); Nigeria Export Promotion Council (NEPC); Nigeria Agricultural Cooperative and Rural Development Bank (NACRDB), formed in the year 2000 from the merging of People's Bank of Nigeria (PBN), Family Economic Advancement Program (FEAP), and the Nigeria Agricultural Cooperative Bank (NACB); The National Poverty Eradication Program (NAPEP); and Research Institutes, among others, (Osuagwu, 2006). Other areas in which the government has been very supportive to the development of entrepreneurship are technical and advisory assistance, marketing, funding schemes and tax incentives. Türker and Selçuk (2009)'s study found that the public, private and non-governmental agencies encourage people to engage in entrepreneurial activities. Policy makers could benefit from understanding that government initiatives will affect business formations only if these policies are perceived in a way that influences intentions (Krueger *et al*, 2000).

Rural Women's Entrepreneurial Intentions: The Socio-economic Determinants

Onyekwelu *et al.* (2008) highlight some pro-development entrepreneurial functions such as identification of investment opportunities, formation and nurturing of enterprises, assembling and coordinating of resources (human and material), invention, innovation, risk bearing, decision-making, etc. These functions according to them are not left only for entrepreneurs in the urban areas but also for the rural entrepreneurs (Nwankwo and Okeke, 2017).

The World Bank (2015) statistically proves that Nigeria's rural dwellers constitute 53% of the country's total population. Nwankwo and Okeke (2017) stressed that the bulk of Nigeria's food and fibre supply come from the rural areas, whose production of cassava, palm produce, etc. has long contributed significantly to the country's gross domestic product (GDP). Then, the contribution of the rural areas, if not average, must be connected with the socio-economic factors (age, household size, income, educational level, membership of relevant association and family size) of the rural people of Kogi State. Though, there are observed contributory backdrops in the national economy due to little concerted effort directed towards bringing the rural entrepreneurship into limelight. The popular orientation of the people of Kogi State seems to be erroneous.

However, Kumari *et al.* (2010) added that a different orientation is required in rural sector and an altogether different outlook is required for developing women entrepreneur that should be based on understanding of the dynamics of rural behaviour. It was confidently argued by Nwankwo and Okeke (2017) that entrepreneurial activities of rural women are critical determinants of the level of success, prosperity, growth and opportunity in any country.

According to Urban (2004), successful implementation of intentions is connected with self-reactiveness, self-reflectiveness and self-efficacy. Urban *Ibid* believes that perceived self-efficacy occupies the pivotal role in the causal structure of social cognitive theory because self-efficacy beliefs affect adaptation and change not only in their own right but also through the impact on other determinants. Economic factors (such as income, availability of finance, recession and unemployment level) affect self-efficacy. This view is further reinforced by Krueger and Dickson (1994) that an increase in self-efficacy increases perceptions of opportunity, that is, individuals who perceive themselves as entrepreneurial capable are expected to be alert and sensitive to opportunity and be able to take advantage of such opportunity if worthwhile. Considering the social factors, Altinay *et al.* (2012) found that family entrepreneurial background positively related to entrepreneurial intention. Apart

from the fact that entrepreneurial trait are hereditary with some families, entrepreneurial intention of some family members could be diagnosed with entrepreneurial background. Supporting these, Zapkau *et al.* (2015) also found that the parental role models positively influence entrepreneurial intention.

RESEARCH METHODOLOGY

Research survey design was used for this study. The design is only interested in describing certain variables in relation to the population. The justification for the use of this design is based on the fact that only a representative sample of the entire population is studied and findings are generalized to the entire population. Meanwhile, the study adopted purposive sampling. This is due to the fact that there is often absence of comprehensive data capturing the totality of objects that interest this study. The target population of this study is the rural women entrepreneurs in Kogi State.

To determine the face validity of the instrument, three copies of the instrument were given to two validators. The researchers carried out a trial testing using the questionnaire on twenty (20) respondents and used the Cronbach alpha test to establish the reliability of the instrument. A reliability coefficient of 0.75 was obtained. Data collected for this study was analyzed using descriptive statistics and regression. The socioeconomic factors that determine the entrepreneurial intention of rural women in Kogi State was analyzed using the 'Ordered Probit Regression Model'. The implicit form of the model is given thus:

$$Y^* = x^1\beta + e_1$$

Where y* is the exact but unobserved dependent variable

X is the vector of independent variables and

B is the vector of regression coefficients which is estimated.

$$Y = (X_1 + X_2 + X_3 + X_4 \ldots \ldots .. X_n) + e$$

Where: Y = Entrepreneurial Intention

X_1 = Age of rural women in years (numbers)

X_2 = Income

X_3 = Marital status (Married=1, others = 0)

X_4 = Level of education (years spent in school)

X_5 = Membership of Cooperative (dummy variable; 1 = members, 0 = Non-members)

X_6 = Family size in numbers

e = Error term

Results and Discussion

The data collected were analyzed and results were discussed in this section.

Table I: Age of Respondents

Age	Frequency	Percent	Valid Percent	Cumulative Percent
15 to 25 years	86	35.0	35.0	35.0
26 to 36 years	22	8.9	8.9	43.9
37 to 47 years	65	26.4	26.4	70.3
48 to 58 years	53	21.5	21.5	91.9
59 years and above	20	8.1	8.1	100.0
Total	246	100.0	100.0	

Source: Field Survey, 2018

The table I shows that 86 respondents (35.0%) are within the age bracket of 15 to 25 years; 22 respondents (8.9%) are within the age bracket of 26 to 36 years; 65 respondents (26.4%) are within the age bracket of 37 to 47 years; 53 respondents (21.5%) are within the age bracket of 48 to 58 years; and 20 respondents (8.1%) are 59 years and above. The respondents with the age distribution of 15 to 25 form the majority. The implication of this is that rural women within this age distribution (15 to 25) nurture more entrepreneurial intentions that are critical to facilitating the economic recovery of Kogi State.

Table II: Educational Qualifications of Respondents

Qualification	Frequency	Percent	Valid Percent	Cumulative Percent
PSLC	48	19.5	19.5	19.5
SSCE	116	47.2	47.2	66.7
Higher Institution	82	33.3	33.3	100.0
Total	246	100.0	100.0	

Source: Field Survey, 2018

The table II above shows that 48 respondents (19.5%) held primary school leaving certificate; 116 respondents (47.2%) held secondary school certificate; 82 respondents (33.3%) held either OND/NCE or HND or B.Sc certificate or higher certificate from higher institutions. The implication of the result is that rural women with secondary school certificate are certainly more important to the economic recovery process of Kogi State, and as such may need more support to translate their entrepreneurial intentions.

Table III: Business Experience of Respondents

Business Experience	Frequency	Percent	Valid Percent	Cumulative Percent
0 to 1 year	55	22.4	22.4	22.4
1 to 5 years	96	39.0	39.0	61.4
6 to 10 years	57	23.2	23.2	84.6
More than 10 years	38	15.4	15.4	100.0
Total	246	100.0	100.0	

Source: Field Survey, 2018

The table III shows that 55 respondents (24.4%) have the business experience of the range of 0 to 1 years; 96 respondents (39.0%) have the business experience of the range of 1 to 5 years; 57 respondents (23.2%) have the business experience of the range of 6 to 10 years; and 38 respondents (15.4%) have the business experience of the range of 48 to 58 years. The implication of this result is that though many rural women have one business or the other but nurture entrepreneurial intentions in other areas that can translate into the economic growth of Kogi State.

Table IV: Responses on gender challenge affecting the entrepreneurial decision of rural women

Responses	Frequency	Percent	Valid Percent	Cumulative Percent
Very Great Extent	98	39.8	39.8	39.8
Great Extent	47	19.1	19.1	58.9
Average Extent	52	21.1	21.1	80.1
Low Extent	25	10.2	10.2	90.2
Very Low Extent	24	9.8	9.8	100.0
Total	246	100.0	100.0	

Source: Field Survey, 2018

The table IV shows that 98 respondents (39.8%) expressed that they are affected by gender challenge to a very great extent; 47 respondents (19.1%) expressed that they are affected by gender challenge to a great extent; 52 respondents (21.1%) expressed that they are affected by gender challenge to an average; 25 respondents (10.2%) expressed that they are affected by gender challenge to a low extent; and 24 respondents (9.8%) expressed that they are affected by gender challenge to a very low extent. however, based on the majority's position it is evident that the entrepreneurial engagement is challenged. The implication of this is that if this barrier is not curtailed, there is likelihood that the Kogi State economic recovery will be challenged.

Table V(a):   Model summary of socio-economic factors and entrepreneurial intentions

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.884[a]	.782	.781	.550

Source: Field Survey, 2018

The Table v(a) shows that 78.2% of the variation in entrepreneurial intentions of rural women in Kogi State is explained by socio-economic factors. This shows a very strong predictor. The presence of 21.8% unexplained variation suggests that there are other predictor variables which affect variations in the entrepreneurial intentions of rural women. The relatively high adjusted R-square of 78.1% shows that the model fits the data well. Given the result, it is deduced that socio-economic factors has strong effect on the entrepreneurial intentions of rural women.

Table V(b): Coefficients of relationship between socio-economic factors and entrepreneurial intentions

Variables	Coefficients	Standard Error	P?|z|
X_1 Age	-1.033	.528	.050
X_2 Income	-5.094	1.926	.008
X_3 Marital status	2.850	.993	.004
X_4 Educational level	.974	.306	.001
X_5 Membership of Cooperative	1.624	.557	.004
X_6 Family	3.279	1.155	.005

Source: Field Survey, 2018

Number of Obs   =   246

LR chi^2 =   93.731

Prob ? chi^2 =   0.000

$$\text{Pseudo R}^2 \quad = \quad 0.394$$

From the result of the Ordered Probit Regression on table 2, the coefficient of determination (LR) of 93.731 and adjusted (Pr) 0.000 which implies that 100% of the changes experienced in the entrepreneurial intentions of rural women were explained by the variables in the model and the Pr ratio on 93.731 shows a significant level at 1%. Interestingly, it is seen from the table that age and income negatively related with the entrepreneurial intentions of rural women in the study area. This implies that the older the rural women becomes the lesser their entrepreneurial intentions. Based on the result, it is depicted that the higher the income of the rural women the lesser their intentions to venture or diversify into other areas of entrepreneurship.

Other variables such as marital status, educational qualification, membership of cooperative and family size have positive effect on entrepreneurial intentions of rural women in Kogi State. This may imply that a change in the marital status and educational qualification of the rural women can motivate a proportional change in their entrepreneurial intentions in Kogi State. Also, the result may imply that the more rural women join a particular cooperative society the more their entrepreneurial intention to start and grow a venture. The availability of financial resource and other forms of resources are likely to determine the level of the intentions of the rural women in entrepreneurship. Finally, increase in family size of rural women's household motivates increasing entrepreneurial intentions to start and grow a venture in Kogi State.

CONCLUSION

There is no way the economic recovery of Kogi State can be facilitated without due attention on social economic factors. These socio-economic factors are determinant of the entrepreneurial intentions of rural women in Kogi State. Age and income have negative effect on the entrepreneurial intentions of rural women in Kogi State. On the contrary, marital status, educational qualification, membership of cooperative and family size has positive effects. The rationale behind rural women joining a particular cooperative society is to access available financial resource and other forms of resources in Kogi State. Factors such as guaranteed credit scheme, viable social network, entrepreneurial assistance and social group support need to be embraced by economic policy makers and the government. There is every tendency that they are also determinantsof the entrepreneurial intentions of rural women, and can influence the economic growth of Kogi State.

RECOMMENDATIONS

The study recommends that:

i.   Socio-economic factors should be taken into consideration in the economic policy of Kogi State as it can boost the entrepreneurial intentions and decision of rural women. For instance, young, married, educated and vibrant rural women should be given more preference in the social investment scheme or other entrepreneurial intervention programmes in Kogi State.

ii. Credit scheme, viable social network, entrepreneurial assistance and social group support should be emphasized and strategically pursued by economic stakeholders and government. Their abundant appearance will promote more ventures of rural women in entrepreneurial activities in Kogi State.

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PERSONNEL TRAINING POLICY AND ITS IMPLEMENTATION IN PLATEAU STATE PUBLIC SERVICE

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Abstract

In awareness of the importance of human resources training in organizations, Plateau State Government came out with laws and personnel training policies to ensure effective human resources development. It sponsored different categories of staff in various training programmes both within and outside Nigeria. Despite the training undertaken by the public servants in the state, they perform below standard. The study therefore, provided answers to the question on: whether the objectives of the personnel training policy were achieved through the implementation of the Staff Training and Human Resources Development programmes in the public service of the state. In order to answer the research questions and achieve the objectives of the study, data were collected using both primary and secondary data. The primary data was obtained through the design of questionnaires and oral interviews. The study area consisted of some selected Ministries, Departments and Agencies (MDAs) in Plateau State Public Service. The target population included staff, Sectional heads and Directors in the MDAs and the Management Staff of the Bureau of Establishments, Management Services and Training (BEMST) in the State public Service. A sample size of five (5) MDAs were chosen using cluster sampling technique. The results showed that the personnel training objectives were fairly achieved; the major challenges facing the policy implementation included tribalism, sectionalism, ethnicity among the policy implementers, and non-accessibility of the training policy document by the employees in the MDAs of the State. It was recommended that there should be a need for the services of committed and qualified policy implementers to be employed to manage the implementation of staff training programmes and development policies in the MDAs; and Personnel Training and Development Policy document should be made available to all the public servants in the State.

Key Words: Policy implementation, Sectionalism, Ethnicity, Personnel development.

INTRODUCTION

Personnel training policy is a key element of public service and its effectiveness is crucial to the overall performance of employees of any organization. The role of personnel training policy in ensuring sustainable productive human resources is crucial to the success of any organization. This study believes that human resources is generally considered as the most valuable tool for the attainment of goals and objectives of any organization. That probably explains the increased role of training in every organization, irrespective of the nature, size and structure and leadership pattern, which is intended to bring desired change. Training of different concepts (technical, conceptual, human, design) provided at different levels (strategic, tactical, operational) has marked a significant growth and effective in working style of employees.

In view of the continuous social development vis-à-vis economic, political and social changes sweeping across every society, it has become necessary to train and retrain employees in an organization if such an organization is to meet up with the challenges posed by these changes. The Plateau State therefore, carried out training programmes and policies intermittently to make its administrative system efficient, responsive and dynamic to the changing needs and aspirations of the citizens. The Plateau State Training Policy in operation had been in existence since early 1970s as contained in Plateau State Government Approved Human Resources Development Policy 1998, p. 8, but was reviewed in 1998 and 2010.

The State's Bureau of Establishments, Management Services and Training is responsible for in-service training requests emanating from Ministries, Parastatals and Departments within the State Public Service. It is based on this that the study provides answers to the research questions stated below:

(i) Have the objectives of the Personnel Training Policy been achieved through the implementation of the Staff Training and Human Resources Development programmes in the Public Service of Plateau State?

(ii) What are the challenges facing Staff Training and Human Resources Development policy implementation?

The main objective of this study was to evaluate the personnel training policy implementation in the public service of Plateau State using five (5) Ministries, Departments and Agencies (MDAs) as the sampled study area. The specific objectives of the study were to:

(i) Evaluate the impact of the implementation of Staff Training and Human Resources Development Policy on MDAs of Plateau State.

(ii) Examine the challenges facing Staff Training and Human Resources Development Policy implementation in the public service and make appropriate recommendations and suggestions where necessary.

This study has the following null hypothesis:

H_0: The implementation of Staff Development programmes has not significantly achieved the personnel training policy objectives in Plateau State Public Service.

CONCEPTUAL ANALYSIS

Concept of Training

Training can be viewed as the process of acquiring knowledge, skills and attitudes for the sole purpose of executing a specific job more effectively and efficiently. It suggests that the scope and range of knowledge, skills and attitudes acquisition is narrow and limited in nature during training activities. This was noted by Atiomo (2000) in his report on the concept of training. He states that the process of developing an individual's skills, knowledge, and abilities is to improve the employee's present and future performance. His study aimed at clarifying the potential of an employee at the workplace. It is therefore, important that employees be trained to improve their job knowledge, skill and future performance. This also has to be emphasized to every employer that no one is a perfect fit at the time of hiring and some training and education must take place.

Mathis and Jackson (2004) see training as a process whereby people acquire capabilities to aid in the achievement of organizational goals. Their study aimed at highlighting the positive outcomes of training employees in meeting the objectives of the organization.

While contributing to the concept of training, Saint, quoted in Aggarwala (2009), states that: Training includes any efforts within the organization to teach, instruct, coach, develop employees in technical skills, knowledge, principles, techniques and to provide insight into and attitudes towards the organization. This reveals to this study that training an employee is to ensure positive development of the organization. Basically, most scholars define training as learning, but broadly speaking, training is the act of increasing the knowledge and skill of an employee for doing a specified job.

Rao and Rao (1997) see training as the act of increasing the knowledge and skill of an employee for doing a particular job. They see training as a short-term educational process, utilizing a systematic and organized procedure by which employees learn technical knowledge and skills for a definite purpose. This study is relevant to this research because it emphasizes the importance of personnel training as a major factor in realizing the organizations' objectives.

Dale (1980) defines training as the organized procedure by which people learn knowledge and/or skill for a definite purpose. In other words, training improves, changes, molds the employee's knowledge, skill, behaviour, aptitude, and attitude towards the requirements of the job and the organization. Training, therefore, refers to the teaching and learning activities carried on for the primary purpose of helping members of an organization to acquire and apply the knowledge, skills, abilities and attitudes needed by a particular job and organization. Training bridges the differences between job requirements and employee's present specifications.

In relating this concept of training to this study, the study extracted a quotation from the 2010 Annual Report of the Training Section of the Bureau of Establishments, Management Services and Training of the Plateau State Government, which states that:

> The essence of the in-service training is to enhance the productive capacity and expertise of serving officers with a view to achieving optimum output and productivity. In order, therefore to realize the laudable training objectives, civil servants of various grades are usually sent on courses of instructions relevant to their fields of endeavour within the country. All these efforts are geared towards raising the level of performance and effectiveness so as to enable the Service cope and adjust to changing circumstances of our time. In addition to sending civil servants on training courses, the training section also sees to the proper conduct of both the Plateau State Polytechnic Civil Service Exams and the ASCON (Administrative Staff College of Nigeria) Public Service Exams. The section also organizes workshops, seminars which are aimed at improving the productive capacity of her workforce (2010 Annual Report of the Training Section of the Bureau of Establishments, Management Services and Training, p. 18).

The above quotation clearly demonstrates the compliance of the Plateau State Public Service management to the needs for training, postulated by some scholars quoted above. The quotation also graphically illustrates the various types of training and the

benefits of training postulated by the scholars.

This study, however, wishes to point out that employees' training is distinct from management development or executive development. While the former refers to training given to employees in the areas of operations, technical and allied areas, the latter refers to developing an employee in the areas of principles and techniques of management, administration, organization and allied areas. Writing on the issue of training, Stemetz quoted in Kassim (2008), considers training as a short-term process utilizing a systematic and organized procedure by which non-management personnel learn technical knowledge skill for a definite purpose. Thus, Stemetz sees training as technically oriented. He noted that training is designed to improve the technical and mechanical skill of personnel.

This assertion was buttressed by Price (1975), also quoted in Kassim (2008). He emphasizes the role of training in management activity, especially in the area of human resources management. According to him, the training function is a management activity in which the personnel department provides the necessary specialist knowledge and usually carries out in addition to the administration requirement, so that the function operates effectively within the organization. He went further to state the basic stages in establishing training function with a view to improving on the human resources productivity. These stages are to: (i) find out the training needs of the particular company at all levels; (ii) formulate a training policy which will meet the needs of the organization; (iii) evaluate the resources, both financial and material which would be required; (iv) provide the necessary specialist training officers who will be responsible for implementing both the training policy and the training plan.

These basic stages in establishing training with a view to improving on the manpower productivity are relevant to this study because they may serve as a guide to the Plateau State Public service in: (a) finding out the training needs of the employees at all levels; (b) formulating a training policy which will meet the needs of public service; (c) evaluating both financial and material resources which could be required for the training of their personnel; and (d) providing the necessary specialist training officers who will be responsible for implementing both the training policy and the training plan of the Plateau State Public Service management.

Kassim (2008) argues that training needs can be said to exist when there is gap between the existing performance of an employee (or group of employees) and the desired performance. He went further to state that to assess whether such a gap exists requires a skill analysis. The analysis according to him has five stages: (i) To analyse

and determine the main requirements of the particular job; (ii) to identify the task required to be undertaken to meet the job; (iii) to understand the procedures required to perform the task; (iv) to analyse the knowledge and skill required to perform the processes; and (v) to identify and specify problems of the job and to analyse any particular skill required to solve the problem.

The above listed stages of skill analysis are very relevant to this study because they will assist the Plateau State Public Service to discover any training needs that may exist when there is gap between the existing performance of its employees and the desired performance. This will enable it to analyse and determine the main requirements of any particular job as well as to identify the task required to be undertaken to meet the job. It will also assist the Plateau State Public Service to understand the procedures required for an employee to perform any given task and to analyse the knowledge and skill required to perform the processes involved in carrying out such responsibilities. The skill analysis will in fact assist the Plateau State Public Service to identify and specify problem of any job and to analyse any particular skill required to solve the problem.

Concept of Personnel Training and Development

It is common for people to see personnel training and development as the same thing. However, it is pertinent to point out that though they are similar, they are not the same thing. Training as pointed out in the preceding section is any learning activity which is directed towards the acquisition of specific knowledge and skills for the purpose of an occupation or task (Cole (1993) quoted in Obiajulu, Anthony & Nick, (2005). This definition reveals that personnel training is a process of enhancing the value of an employee. It is not economic growth but rather improvement of the performance of an employee in the workplace.

On the other hand, the concept of personnel training can be seen as the systematic process of altering employee's behaviour to further organizational goals. More concisely, Hellriegel and Slocum (1996), quoted in Obiajulu, et al (2005, p. 106), define personnel training as improving an employee's skill to the point where he or she can do the current job. These definitions are relevant to this study because they reveal some characteristics of analyzing personnel training. They also aimed at bringing about acceptable levels of staff behaviour in all organizations.

Personnel development, on the other hand, focuses on building the knowledge and skills of organizational members so that they will be prepared to take on new responsibilities and challenges. This was supported by Adamolekun (1983), when he

says that staff development involves the training, education and career development. He further states that it rests on certain fundamental requirements which he identified to include: (i) Creating a pool of readily available and adequate replacements for personnel who may leave or move up in the organization; (ii) enhancing the company's ability to adopt and use advances in technology because of a sufficiently knowledgeable staff; (iii) building a more efficient, effective and highly motivated team which will enhance the company's competitive position and improve employees' morale; and (iv) ensuring adequate human resources for expansion into new programmes.

From the above, it is now clear that there is a major difference between personnel training and development, though both of them are geared towards increasing or improving the skills of workers. Training is concerned with teaching the workers specific skills that will assist them in their immediate task while development on the other hand, is concerned with teaching the workers more general skills that will assist them in career growth, thereby equipping them for the future. This implies that personnel development refers to any learning activity which is directed towards future needs rather than present needs and which is concerned with career growth than immediate performance. In support of the above, Cole (1993) quoted in Henry (1999) further clarifies that, the intent of personnel development programmes is to improve an employee's conceptual and human skill in preparation for future jobs.

In the words of Nwachukwu (2007), employee training and development are at the heart of employee utilization, productivity, commitment, motivation and growth. He further observes that, many employees have failed in organizations because their needs for training was not identified and provided for as an indispensable part of management function. In order to distinguish personnel training development, he notes that raining is an organizational effort aimed at helping an employee to acquire basic skills required for the efficient execution of the activities and functions for which he is hired. He sees personnel development as dealing with the activities undertaken to expose an employee to perform additional duties and assume positions of importance in the organization's hierarchy. His contribution to employee training and development is important to this study because of its emphasis on exposing an employee for better performance and also updating their skills. However, it is inadequate, because he fails to look at the role of organizations' policy making process.

In contributing to the importance of personnel training and development, Peretomode and Peretomode (2005, p. 98) see personnel training and development as "… an important phase in human resources management". They observe that,

"Employees may become obsolete or rustic if they do not update themselves with new work methods, skills and knowledge about their work, the organization and the environment, the entire organization may also become rustic and obsolete if it lacks a systematic means of continually developing and renewing organizational capabilities".

In supporting this argument, Klatt and his colleagues (1985) reported that it has been estimated that an engineer's knowledge of his or her field is cut half every 10 years because of the advancement of the field – unless he or she continues to work". Training and development activities are therefore, planned programmes of both individual and organizational improvement. The lesson to derive from this report is that the government has to evaluate its training and development programmes in order to enhance performance in the public service.

Development is planned activities which focus on increasing and enlarging the capabilities of employees so that they can successfully handle greater and/or assume higher positions in the organization's hierarchy to better handle current responsibilities. Development usually focuses on improving the abilities needed to handle complex situations and do a better job (Mathias and Jackson, (2004), Klat, et al., 1985), quoted in Peretomode and Peretomode (2005)). Consequently, development is therefore, not only 'person-oriented', but it also focuses on supervisory and managerial personnel.

The reason for manpower training and development is that, as jobs are becoming more and more complex, it becomes imperative for employees of labour to train their workers unlike when jobs were simple and little technical knowledge was required from the workers. Personnel training and development are, therefore, two interrelated processes which importance cannot be overemphasized because they are related to a series of activities which an organization would need to embark upon to improve the quality of its managerial capital as well as workforce. Kassim (2008) describes manpower development as the systematic process which an organization has to go through to ensure that it has the effective managers it requires to meet its present and future needs.

In the views of Chanokan (1987) quoted in Abba & Okoye (2004), personnel development refers to the nature and direction of change induced in the employees as a result of educating and training programmes. He says that development is managerial in nature and career focused. To distinguish training and development, he argues that, unlike the training of the workers which improves technical and mechanical skills, development techniques are designed for work behaviour

modification. According to him, development is an educational process, utilizing a systematic organizational procedure by which a worker learns the conceptual and theoretical knowledge for effective pursuance of his or her responsibilities.

This study agrees with the foregoing review of several literatures on personnel training and development but observes that training facilitates human resources development and consequently its performance. This postulation is very relevant to this work because it shows the importance of training workers in an organization.

The study also aimed at clarifying the potentials of an employee at the work place. It is therefore, important that employees be trained to improve their job knowledge, skills and future performance. This also has to be emphasized to every employer that no one is a perfect fit at the time of hiring and some training and education must take place.

Typical Topics of Employees' Training and Development Programmes

The following are typical topics of employees' training developed by Ceerter (2010). He discusses them as follows:

(a) **Communications:** The increasing diversity of today's workforce brings a wide variety of languages and customs.

(b) **Computer Skills:** Computer skills are becoming a necessity for conducting administrative and office tasks.

(c) **Customer Service:** Increase competition in today's global market place makes it critical that employees understand and meet the needs of customers.

(d) **Diversity:** Diversity raining usually includes explanation about how people have different perspectives and views, and includes techniques to value diversity.

(e) **Ethics:** Today's society has increasing expectations about corporate social responsibility. Also, today's workforce brings a wide variety of values and morals to the workplace.

(f) **Human Relations:** The increased stresses of today's workplace can include misunderstandings and conflict. Training can make people get along in the workplace.

(g) Quality Initiatives: Initiatives such as Total Quality Management, Quality Circles, Benchmarking, etc, requires basic training about quality concepts, guidelines and standards for quality, etc.

(h) Safety: Safety training is critical while working with heavy equipment, hazardous chemicals, repetitive activities, etc, but can also be useful with practical advice for avoiding assaults, etc.

(i) Sexual Harassment: Sexual harassment training usually includes careful description of the organization's policies about sexual harassment, especially about what are inappropriate behaviours (Ceerter, 2010, http://www.management.org/ting-develop-basis/reasons.htm).

Topics of Employees' Training Programmes in Plateau State Public Service

In Plateau State Public Service, the topical topics of employees' training programmes are diverse. As pointed out in our earlier discussion, the training programmes in Plateau State Public Service are varied. They include in-service, on-the-job training, off-the-job training and short-term courses, professional courses, study leave with and without pay.

As for topics of the study, it depends on the nature of the training required, but the Plateau State Training Policy Document (2010) shows that such topics include:

(i)   Teachers' training/school administration;

(ii) Health workers;

(iii) Legislative drafting for staff of the Ministry of Justice;

(iv) Legal practice and procedure for High Court staff;

(v) Leadership and Empowerment for Women Permanent Secretaries and Director-Generals;

(vi) Computer programmes;

(vii) Personnel management;

(viii) Shipping;

(ix) Clerical;

(x) Accounting and Auditing;

(xi) Insurance and Pension;

(xii) Estate Management;

(xiii) School Administration;

(xiv) Secretarial Studies;

(xv) Degree courses in various disciplines;

(xvi) OND/HND courses in various disciplines;

(xvii) Nursing/Midwifery;

(xviii)   Medical Laboratory, etc (1998, Annual Report: Training Department, Bureau of Establishments, Management Services and Training, Office of the Secretary to the State Government and Head of Civil Service, Jos).

The lessons to drive from the above reveal that the Public Service's primary role in achieving personnel training and development should be seen in providing leadership. This should be demonstrated by establishing appropriate personnel training programmes and financing them effectively.

Types of Training and Personnel Development Programmes

There are many types of training and personnel development programmes available. The particular method chosen by an organization can be influenced by considering cost and time available, number of persons to be trained, depth of knowledge required, background of the trainee, etc.

1. On-the-job-training

This is perhaps the commonest and the oldest method of training. It is a method by which employees (especially new employees) are trained on the job usually by assigning them to experienced supervisors or senior co-workers. Strengthening the on-the-job-training, Bedeian (1986) notes that "the trainee is expected to learn by observing the supervisor or co-workers, and working with the actual equipment and materials that will be used once on-the-job-training is completed".

Armstrong (2005, p. 563) sees on-the-job-training as consisting of:

> Instruction or coaching by trainers, managers or team leaders in the work place. It may also consist of individual or group assignments and projects,

and the use of mentors. The individual works, learns and develops expertise at the same time. Theory is put into practice immediately and its relevance is obvious. Much of the learning can take place naturally through day-to-day contacts, although it will be most effective if specific learning objectives have been articulated.

From the above, it considers on-the-job-training as training given in the normal work situation in the attitude/knowledge/skill behaviour pattern appropriate to a task or job. It may also constitute the whole of the training or be combined with off-the-job-training and/or further education. This also reveals that the management of personnel training system should be based upon the designing training programmes to increase the skills of employees.

On-the-job-training methods, according to Peretomode and Peretomode (2005, p. 108), includes: (a) Orientation training; (b) Apprenticeship; (c) Internships; (d) On-the-job coaching; (e) In-service training; (f) Special projects; (g) Committee understudy assignment; (h) Vestibule training; (i) Job rotation; and (j) Assistant-to-position.

2. *Off-the-job training*

Off-the-job training, most commonly called the classroom training is the traditional way of education which places the trainee in a classroom. According to Aggarwala (2009), most of the off-the-job development programmes include some classroom instructions, which are used in formal training courses away from the place of work. These include lectures, talks, discussions, case studies, role playing, simulation, group exercises and workshops.

> Obiajulu, et al. (2005, pp. 108-109) established that off-the-job training is:
>
> One that is organized outside the worker's job location. It is usually organized in a training centre or an educational institution. While on-the-job training is usually done under the guidance of an experienced employee, most off-the-job programmes are usually organized by experts or consultants who do not work in the same organization with the trainees.

In his study, Obiajulu discovered that it is normally only a part of the whole training programmes and is usually combined with on-the-job training and/or further education, and that most off-the-job programmes are organized outside of the work place. As a result, trainees travel long distance to reach available educational institutions.

The concept of off-the-job training is very relevant to this study because it captures must of the variables that this work wants to evaluate. Among such variables to be assessed in the study include training programmes, manpower training and development. However, their works fail to look at the strategies for effective implementation of training policy in a public service which is paramount in the success of any programme. The types of off-the-job training include the following: (a) Lecturers; (b) The group discussion method; (c) Case studies; (d) Role playing; (e) Conferences/Workshops/Seminars; (f) Information Presentation Method; and (g) Professional training.

Theory

(1) Top-down theory of public policy implementation

The understanding of policy implementation is very important to this study because it is an important feature in understanding the impact of a policy on the target population. Consequently, this study views the top-down approach to studying personnel training policy of Plateau State as relevant because of its assumption that policies contain clearly defined goals against which performance can be measured. This was argued by Sapru (1983, p. 261) that top-down implementation strategies depend on the capacity of policy objectives to be clearly and consistently defined. The personnel training policy has clearly defined objectives against which performance can be measured. For instance, the first objective of the Plateau State Bureau of Establishments, Management Services and Training is "to promote job satisfaction, efficiency and industrial harmony within the public service". This objective is relevant to this study because the goals of the policy can be identified against which evaluation of its impact on the employees can be measured. Additionally, the model also stresses that any public policy must contain clearly defined policy tools for implementation of objectives. Here, once more, the focus of this study will be to identify the policy tools and agencies that have been put in place to implement the training policy by government.

Other assumptions of the theory that this study feels are relevant to the research are: There is an "implementation chain" that starts with a policy message at the top and sees implementation as occurring in a chain. The policy formulators have good knowledge of the capacity and commitment of the implementers. According to David (2005, p. 78), capacity encompasses the availability of resources for an implementing organization to carry out its tasks, including monetary and human resources, legal authority and autonomy, and the knowledge needed to effectively implement the policy. Commitment includes the desire of the implementers to carry

out the goals of the top level policy designers; a high level of commitment means that the values and goals of the policy designers are shared by the lower-level implementers, particularly those at the "street-level", such as nurses, teachers, trainers or counselors. The personnel training programme was designed as part of the overall manpower development for the public servants.

The study uses the theory to assess the capacity and commitment of the Bureau of Establishments, Management Services and Training along with the Ministries as well as their agencies and training institutions in implementing the policy. The personnel training policy requires considerable cooperation from Plateau State government and its agencies as well as relevant ministries and training centres, universities, etc. This theory also helps this study to analyse the extent of cooperation among the stakeholders in the implementation of the policy.

The study adopted the top-down theory of policy implementation in evaluating the impact of the policy on employees because of the limited resources. In connection with this, Ajileye (1992) observed that top-down approach to policy implementation studies is appropriate when one has limited resources to backward map of the implementation of a particular issue. Also, Shut (2005) observed that "It is considerably easier to look up, statute, other pronouncements issued by top level policy designers than it is map all the various interests, agencies… that will carry out a policy".

(2) The goal-attainment model

Goal attainment model is an approach that is generally agreed as the classical way of approaching the evaluation of a policy. This study adopted the goal-attainment model as the theoretical framework for assessing the impact of the personnel training policy in Plateau State in terms of the achievement of the stated goals of the policy and its overall effect on the manpower development of the State public servants. This model also agrees that there are two ingredients of goal-attainment in evaluating any public policy; this includes the goal achievement measurement and impact assessment.

The study adopted this model because of the fact that it asks questions about the substantive content, output and outcomes of policy, and not about the policy procedures. Evert (2005, p. 35) noted that:

> It takes the goals of the programme as stated and then collects evidence as to whether it has achieved these goals. The goals serve as the exclusive source of standards and criteria. The evaluator assesses what

have the programme developers said they intended achieving. The discrepancy between the stated goals and outcomes is the measure of programme success.

This therefore, means that the crucial point is that the goals of the policy are the concerns in the evaluation. The study also sued this model to find out the extent to which the training policy has contributed to achieving development for the employees in the service of Plateau State Government as well as their overall productivity.

METHODOLOGY

In order to provide empirical data to supprt this research, the study utilized both primary and secondary methods of data collection to collect data for this research. The primary data was collected with the aid of questionnaires to evaluate the performance of personnel training policy and human resources development in the selected MDAs in Plateau State. Two sets of questionnaires were used to collect the data, one for the employees in the selected MDAs and the other one for the directors in the selected MDAs and the Management Staff of the Bureau of Establishments, Management Services and Training (BEMST). The questionnaires for the study were structured to ensure accuracy and speedy response to questions that are open-ended and close-ended. The secondary data for the research were collected through the use of books, journals, conference papers and through intensive documentary study of relevant publication of the BEMST and MDAs in Plateau State.

In addition to questionnaire methods, oral interviews were conducted for the Directors, Sectional Heads in the selected MDAs and the management staff of the Bureau of Establishments, Management Services and Training. The study area consisted of some selected Ministries, Departments and Agencies (MDAs) in Plateau State Public Service. The target study population were staff, Sectional Heads, Directors in the MDAs and Management Staff of the Bureau of Establishments, Management Services and Training (BEMST).

The sample size for this study was made up of the following MDAs: Plateau State Ministries of Education, Health, Lands, Survey, and Town Planning, Finance and Information and Communication. The Department and Agencies are Universal Basic Education, Hospital Management Board, Jos Metropolitan Board, Board of Internal Revenue, and Radio Television Corporation. The purposive sampling technique was adopted in arriving at the MDAs to be included in the sample. The sample size for the staff in the MDAs was determined based on the formula given by Yamane (1967) for

determining sample size in social science research which is:

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

Where **n** is the sample size, **N** is the population size and **e** is the level of precision or the error limit. The total population for the study area that made the sample was 19,880 (Report of the High Powered Committee to look into the Condition of Service and Remunerations in the Public Service of Plateau State, 2011).

Applying the formula and using 0.05 as error limit, the sample size for the study was determined thus:

$$n = \frac{19,880}{1 + 19,880(0.05)^2}$$

$$n = \frac{19,880}{1 + 49.7}$$

$$n = \frac{19,880}{50.7}$$

n = 392.11 approximated to 392 people.

Allocating n proportionally using formula gives:

$$ni = \frac{nNi}{N}$$

Where n = Sample size

Ni = Population of Study in each MDA

N = Total Population of Study

n_1 = Education Ministry

n_2 = Finance Ministry

n_3 = Health Ministry

n_4 = Lands, Survey & Town Planning Ministry

n_5 = Information & Communication Ministry

Substituting:

$$n_1 = \frac{392 \times 11,873}{19,880} = 234.11 \text{ approximated to } 234$$

$$n_2 = \frac{392 \times 4,486}{19,880} = 88.45 \text{ approximated to } 88$$

$$n_3 = \frac{392 \times 1,262}{19,880} = 24.88 \text{ approximated to } 25$$

$$n_4 = \frac{392 \times 974}{19,880} = 19.20 \text{ approximated to } 19$$

$$n_5 = \frac{392 \times 1,285}{19,880} = 25.33 \text{ approximated to } 25$$

A total of 391 copies of questionnaires were administered on the employees in the selected MDAs based on the sample formula for determining sample size as indicated in the study. The questionnaires were administered as follows:

Table 1: Questionnaires Administered

Ministry, Departments & Agencies (MDAs)	Population	Sample
Ministry of Education & Universal Basic Education Board	11,873	234
Ministry of Health & Hospital Management Board	4,486	88
Ministry of Lands, Survey and Town Planning & Jos Metropolitan Development Board	1,262	25
Ministry of Finance and Economic Planning & Boar of Internal Revenue	974	19
Ministry of Information and Communication & Plateau Radio Television Corporation	1,285	25
Total	**19,880**	**391**

Source: Plateau State High Powered Committee Report, October (2011), Vol. 2, Appendix 6.

This population figures were based upon the Main Report of the High Powered Committee to look into the Conditions of Service and Remunerations in the Public Service and Remunerations in the Public Service of Plateau State. The sample

questionnaires administered in each of the selected MDA were obtained using the formula below:

$$\frac{Ni \ \times \text{Total Population of MDA}}{\text{Grand Total Population of Selected MDAs}}$$

Where Ni equals to the sampled size of the study of 392 multiplied by the total population of each MDA divided by the grand total population of the selected MDAs. The choice of this formula for determining the sample size was based on the fact that descriptive statistical tool of analysis was used.

In order to avoid and to achieve reliability of the data in this study, the respondents were not required to indicate their names on the questionnaires. This is to ensure confidentiality. Also, to achieve content validity, the researcher designed questionnaires using simple language for better understanding and clarity.

Data Presentation and Analysis

This section deals with the presentation, analysis and interpretation of data. The data was presented, analysed and interpreted using Chi-Square statistics in testing the hypotheses.

Table 2: Objectives Set in the Personnel Training and Development Programmes

Responses of Directors	Frequency	Percentage (%)
Yes	25	69.4
No	1.1	30.6
Total	**36**	**100.0**

Directors were asked to indicate by way of saying "Yes" or "No" if the objectives of the personnel training policy were achieved through the implementation of the Staff Training and Human Resources Development programmes in the Public Service of Plateau State. Table 2 above shows that 69.4% of the directors indicated "Yes", while 30.6% of them indicated "No". This reveals that a greater part of the objectives set in personnel training policy were achieved through the implementation of the Staff Training and Human Resources Development progarmmes in the public service of Plateau State. This is in line with the interview results conducted with the directors and sectional heads in the selected MDAs who testified that most of the objectives set for the staff training and development programmes have been achieved. This is because many of the workers have obtained higher certificates than the ones they had before the training.

The implication of this finding is that the objectives of the personnel training policy were achieved through the implementation of staff training and Human Resources Development programmes in the public service of Plateau State.

Table 3: Challenges of Training Policy by their Effects on the Institution

Major Challenges of Training Policy	Frequency	Percentage (%)
No response	15	41.6
Funding (Training funds do not go round the trainees)	18	50.0
Lack of awareness by staff	2	5.6
Inability to access budgetary provision	1	2.8
Total	**36**	**100.0**

The directors/management staff of the MDAs were asked to state the major challenges affecting personnel training policy in their MDAs. Table 3 reveals that 50.0% of the management staff stated that one of the major challenges facing personnel training policy in the MDAs is that the funding of the public service is not sufficient, 5.6% of the directors stated that there is lack of awareness by the staff in the public service, while 2.8% of the management staff stated that one of the major challenges affecting personnel training policy in the MDAs is that there is the inability of the staff and even the directors or management staff to access the state's budgetary provision for personnel training programme. The interview results obtained from the directors and sectional heads in the selected MDAs showed that the personnel training policy does not have any effect on the institution of learning that trained the staff of the MDAs. This is because the institutions training funds in the MDAs, because many of the management staff do not have access to budgetary provision.

This shows that there is the non-availability of the copy of the training policy for the directors to select the right caliber of staff for training. The implication of this finding is that most of the directors, with the exception of the state's director of training, were operating without the public service guidelines.

Table 4: The Challenges of Personnel Training Policy in Plateau State by Workers

Major Challenges of Training Policy	Frequency	Percentage (%)
No response	16	11.4
There are challenges	109	77.9
There are no challenges	15	10.7
Total	**140**	**100.0**

Workers were asked to indicate "Yes" or "No" if there challenges of personnel training policy in the public service of Plateau State. Data on table 4 show that 77.9% of the workers indicated that there are challenges of personnel training policy in the public service of Plateau State, 10.7% indicated that there are no challenges of personnel training policy in the public service of Plateau State.

The analysis in table 4 reveals to us that there are challenges facing the personnel training policy of the Plateau State Public Service. This is in line with the interview result conducted with some of the directors and sectional heads in the selected MDAs in which they indicated that most of the challenges facing the personnel training and human resources development policy implementation in the State are caused by the politicians who are not administrators by training; who joined the system with the political mentality which in turn causes harm to the efficacy of the entire system. The implication of this finding is that there are challenges facing personnel training policy but much of these are from the political class.

Table 5: Personnel Training Policy by its Implementation

Major Challenges of Training Policy	Frequency	Percentage (%)
No response	28	20.0
Yes	56	40.0
No	56	40.0
Total	**140**	**100.0**

The workers were asked to agree or not agree that there is a relationship between personnel training policy and its implementation in the public service of the State. Table 5 above shows that 40.0% of the staff agreed that there is a relationship between training policy and its implementation in the public service of Plateau State, while 40.0% of the employees disagreed that there is no relationship between personnel training policy and its implementation in the public service of Plateau State.

This shows that the relationship between personnel training and its implementation in the public service of the State is fair. This finding reveals that the public servants were biased in passing their judgment. This is in line with the interview conducted with some of the sectional heads in the selected MDAs who indicated that not all workers have the confidence to point out the weakness of their superior, especially those superiors that brought them into the system. In the real sense, there would be no basis for comparison but they may want to say there is only to protect their political leader who brought them into the system. The interview result also indicated that there is favouritism, tribalism, sectionalism, godfatherism and so on in the

implementation of the training policy by the implementers. The result of the interview also revealed that the rules of implementation and policy are available but they are not put to use, which creates a gap between theory and practice.

The implication of this finding is that the relationship between personnel training policy and its implementation in the Plateau State Public Service is fairly adequate.

Table 6:   **How many times have you been sponsored by your employer for training and development?**

Time Sponsored by Employer	Frequency	Percentage (%)
No response	7	5.0
Once	49	35.0
Two times	33	26.6
Three times	10	7.1
Four times	4	2.9
All of the above	5	3.6
None of the above	32	22.9
Total	**140**	**100.0**

Table 6 above shows that 35.0% of the workers were being sponsored by their employers for training and development programmes for one time, 23.6% indicated two times, 7.1% of the staff indicated three times, 2.9% indicated four times, 3.6% indicated all of the above, while 22.9% of the workers indicated none of the above. This means that the employers have sponsored their employees on several occasions. It also shows that the employers or MDAs have tried by sponsoring their employees a number of times for training and development programmes. The implication of this finding is that the MDAs train and sponsor their employees all the time.

Test of Hypothesis and Analysis

This research work was conducted with a hypothesis. The following data were collected on the opinion of staff in the public service on the number of times they were sponsored for training programmes in their various MDAs in order to test the hypothesis.

Table 7:   **Contingency Table the Hypothesis:**
            Implementation of Training Policy and Number of Times Trained

If yes, how many times have you been sponsored		Rating the Implementation of Personnel Training				
		Very high	High	Very low	Low	Total
Once	Count	1	18	10	14	43
Twice	Count	0	8	10	17	35
Three times	Count	0	3	4	3	10
Four times	Count	0	2	0	0	2
None of the above	Count	0	9	9	17	35
Total	**Count**	**1**	**40**	**33**	**51**	**125**

Table 8: **Cross Tabulation Table Observed for the Hypothesis Observed and Expected**

If yes, how many times have		Rating the Implementation of Personnel Training				
		Very high	High	Very low	Low	Total
Once	Count	1	18	10	14	43
	Expected Count	.3	13.8	11.4	17.5	43.0
Twice	Count	0	8	10	17	35
	Expected Count	.3	11.2	9.2	14.3	35.0
Three times	Count	0	3	4	3	10
	Expected Count	.1	3.2	2.6	4.1	10.0
Four times	Count	0	2	0	0	2
	Expected Count	.0	.6	.5	.8	2.0
None of the above	Count	0	9	9	17	35
	Expected Count	.3	11.2	9.2	14.3	35.0
Total	**Count**	**1**	**40**	**33**	**51**	**125**
	Expected Count	**1.0**	**40.0**	**33.0**	**51.0**	**125.0**

The expected counts are gotten by applying the following formula:

$$\text{Expected Counts} = \frac{\text{row total} \times \text{column total}}{\text{grand total}}$$

This is calculated for each cell as each cell belongs to a row and a column.

Table 9: Calculation of the Chi-Square Tests

Description	Value	DF	Asymp. Sig.	(2-Sided)
Pearson Chi-Square	11.775[a]	12	.464	
Likelihood Ratio	12.242	12	.426	
Linear-by-Linear Association	1.679			
N of Valid Cases	125			

a. 11 cells (55.0%) have expected count less than 5. The minimum expected count is .02.

Decision: From the Chi-Square tests above, the probability value (P-Value) is given as 0.464 (the value is row one column of the Chi-Square table above) which is greater than 0.05. Based on the decision rule, the null hypothesis (H_0) is accepted while the alternative hypothesis (H_1) is rejected, thus concluding that the implementation of

Staff Development programmes has not significantly achieved the Personnel Training policy objectives in Plateau State Public Service. The difference is statistically significant.

The implication of this finding is that the implementation of the staff development programme in the State's Public Service has not significantly achieved the personnel training policy objectives in coordinating the employees' training needs of the various Ministries, Departments and Agencies (MDAs) in the Public Sector.

RESULTS AND DISCUSSION

This section of the research work discusses and interprets the result of the research study. The discussion of the results was based on the research questions that guided the study.

Achievement of Objective of Personnel Training Policy Through the Implementation of Staff Training and Development Programmes in the MDAs of Plateau State.

The research question was to establish whether the objectives of the Personnel Training Policy have been achieved through the implementation of Staff Training and Development programmes in the public service of Plateau State. The literature reviewed in the conceptual analysis section stated that the invention of series of programmes which have led to privatization, down-sizing and right-sizing of the public service has minimized the role of the public sector in the nation life (Agagu, 2008). This work has shown that the selected MDAs (Ministries, Departments and Agencies) of Plateau State were engaged in some form of training and human resources development programmes. The research study has also shown that the employers/MDAs under study have tried by sponsoring most of their employees for training and development programmes. This is in line with the reviewed literature in conceptual analysis section which stated that the objective of an organization's policies, processes and programmes for the delivery of learning and training is to achieve its human resources development strategies by ensuring that it has the skilled, knowledgeable, and competent people required to meet its present and future needs.

Challenges Facing Personnel Training and Human Resources Development Policy Implementation.

This question was asked to establish whether there are challenges affecting personnel training and human resources development policy implementation in the MDAs of Plateau State Public Service. The literature reviewed in the conceptual analysis section stated that better performance has been linked with organizations that implement practices based on the fact that commitment approach is used. This aims at increasing effectiveness, productivity and relies on conditions that encourage employees to identify with the goals of the organization and also work in order to achieve common goals (Walton, 1995).

This study has shown that there are challenges facing the personnel training and human resources development policy implementation in the MDAs of the Plateau State which has affected the success of the policy. The major challenges facing the policy implementation include sectionalism, ethnicity, nepotism, etc among the implementers of the policy, tribalism among the policy implementers, and inadequate funds for training in the MDAs of the State. It was also discovered that most of the challenges facing the personnel training and human resources development policy implementation are caused by the politicians who are not trained administrators and who join the system with the political mentality which in turn causes harm to the efficacy of the entire system.

The research study also has shown that the challenges facing the personnel training and human resources development policy implementation include the non-accessibility of the training policy document by the employees in the MDAs of Plateau State.

In summary, the study was conducted to evaluate the achievement of the Personnel Training Policy objectives inscribed in the Staff Training and Human Resources Development programmes of the Plateau State Public Service. The major findings of the study are that:

1. Some of the personnel training policy objectives have been significantly achieved through the implementation of Staff Training and Human Resources Development programmes in the MDAs of the State. The policy objectives of the personnel training policies that have been significantly achieved include the MDAs engagement in staff training programmes in the State. The study has also observed that the MDAs under study have sent and sponsored most of their employees for training programmes.

2. 63.6% of the employees working in the MDAs under study cannot adequately express themselves in writing. This shows that the activities of these individual staff can have a negative effect on the MDAs, because they cannot handle sensitive and complicated matters or issues concerning staff and organization, especially when it concerns documentation.

3. Though the Personnel Training Policy has fairly achieved on staff education, there are other challenges facing the policy implementation in the MDAs of the State which include favouritism, tribalism, sectionalism and godfatherism in the implementation of the training policy by the implementers. It was also found that the rules of implementation and policy are available but they are not put to effective use and this creates a gap between theory and practice.

CONCLUSION

This study was conducted in order to evaluate the personnel raining policy and its implementation in the Public Service of Plateau State. From the analysis and findings of this research, it can be concluded and generalized that the implementation of Staff Training and Human Resources Development Policy in the State Public Service has significantly achieved the personnel training policy objectives on the MDAs.

Although the Staff Training and Development Policy has recorded some successes in staff training in the MDAs of the State, it was discovered that the rules of implementation and policy were available but they were not put to effective use and this creates a gap between theory and practice.

The study also discovered that the Staff Training and Human Resources Development Policy of the State is challenged with problems such as godfatherism, ethnicity, sectionalism, tribalism and so on in the implementation of the policy.

RECOMMENDATIONS

The following recommendations were made to enhance the success of personnel training policy objectives through the implementation of staff training and human resources development programmes in the MDAs of Plateau State Public Service.

1. **Policy implementers' commitment:** The success of any programme depends on commitment of the implementers to the rule and policy of the programme. In a situation where the rules and policies of the programme or the organization are not adhered to, it is not good enough for the successful implementation of the programme. One of the fundamental findings of this research is that the rules of

implementation and policy are available, but they are not put to effective use which creates a gap between theory and practice. Based on this, therefore, there is need for the services of committed and qualified policy implementers to be employed to manage the implementation of staff training and human resources development policies in the MDAs of Plateau State Public Service.

2. **Improving human resources development policy:** The research study has shown that the personnel training policy of Plateau State Public Service is faced with such problems as sentiment among the policy implementers. It is therefore, very critical for Bureau of Establishments, Management Services and Training (BEMST) to improve the standard of the policy document by incorporating the necessary indicators for the strengthening of the policy document. There is need for the leadership of the state to equip the Staff Training and Human Resources Units in each MDA for the successful implementation of the human resources development programmes in the MDAs. This will reduce the challenges facing the policy.

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INFLUENCE OF HUMAN CAPITAL ON PERFORMANCE OF WOMEN OWNED ENTERPRISES IN NORTHERN NIGERIA

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Abstract

The objective of this study is to extend the Resource Based View of the firm to examine the influence of human capital on the performance of women owned micro and small enterprises in Northern Nigeria. The study adopted a quantitative research methodology and used cross-sectional survey method to collect data from 342 respondents out of which 234 were used for the analysis. The hypothesized path was examined with the use of Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that human capital has no significant influence on the performance of women owned enterprises in the study area. The study has contributed to knowledge by extending the RBV to the study of women owned micro and small businesses in Northern Nigeria. The study also provides practical implications for women business owners and policy makers by providing a better understanding of the influence of human capital on the performance of micro and small enterprises owned by women. Finally, the study recommends that women business owners should acquire and utilize other resources since improvement in human capital will not cause an improvement in performance. The study also made suggestions for future research.

Key words: Human Capital, Northern Nigeria, Performance, Resource-Based View, and Women-owned Enterprises.

1. INTRODUCTION

The number of women going into entrepreneurship has continued to be on the rise globally. A Global Entrepreneurship Monitor (GEM) 2016/ 2017 women report shows that an estimated 163 million women were starting or running new businesses in 74 economies around the world and another 111 million women are already running established businesses (GEM, 2017).The Organization for Economic Co-operation and Development (OECD), (2004) and United Nations Industrial Development Organization (UNIDO), (2008) have recognized the role of women entrepreneurs as major contributors to innovation, job creation and economic growth. They play a vital role in the economic advancement of their families and the communities in which they live. The economic empowerment of women allows them to make significant contribution to economic development (Sarfaraz, Faghil & Majd, 2014).

Despite the important role that women entrepreneurs play in the economic development of their families, communities and the nation, studies have shown that women entrepreneurs experience low business performance when compared to their male counterparts (Akanji, 2006; Osunsan, 2015). Whereas the number of women venturing into entrepreneurial activities in developing countries has continuously been on the rise, majority of women-owned enterprises have low business performance. Performance of a business involves features that demonstrate alteration in degree of activities in physical size. Such features include among others, sales volume, profits, number of employees and general satisfaction with the way the business is progressing.

Literature reveals that there are a number of factors that affect the performance of women-owned enterprises. Human capital, both generic and specific has been found to be very important for women entrepreneurs in running their businesses successfully. Empirically human capital has been found to contribute to performance and growth of businesses (Coleman, 2007; Colombo & Grilli, 2005; Fatoki, 2011; Ganotakis, 2012; Msoka, 2013; Urban & Kongo, 2015).

The Resource Based View of the firm (RBV) is an important perspective in explaining how resources influence performance. This view rests on the assumption that organizations competitive advantage and consequently superior performance is the result of efficient utilization of the internal resources that the organizations possess or have access to. These resources are valuable, rare, inimitable and non-substitutable (Bromiley & Rau, 2016; Chaston, 2015).The resources and capabilities a firm manage and utilize in its business significantly contribute to achieving

enterprise performance. However, women entrepreneurs generally have fewer resources to run their businesses, resources such aseducation, related experience, knowledge in business and skills. In the field of strategic management where the RBV resides performance is the most important outcome variable therefore, an understanding of the factors that influence performance is beneficial. Research gap still exist in the area of RBV research and how resources are related to performance has not been fully investigated. With respect to contextmost RBV studies are carried out in developed countries and on large firms, few studies exist that applies the RBV to the study of small businesses (Runyan, Swinney & Huddleson, 2007).

In view of the gap mentioned this study examined the subject by customizing the RBV of the firm to the study of micro and small businesses owned by women. The specific objective is to assess the influence of human capital on performance of women-owned enterprises in Northern Nigeria and to answer the question "to what extent does human capital influence the performance of women-owned enterprises?"

The hypothesized relationship is stated as follows,

H_1 *Human capital positively influence performance of women-owned enterprises*

2.0 LITERATURE REVIEW AND THEORETICAL/CONCEPTUAL FRAMEWORK

This section discusses the theoretical framework backing the study and pertinent conceptual issues associated with the study as well as a review of related works.

2.1 Theoretical framework

In this study the RBV of the firm was adapted to the study of micro and small businesses owned by women. The RBV rests on the assumption that businesses compete on the bases of their resources and capabilities and these resources determine competitive advantage and subsequently better performance. From the RBV perspective human capital can be viewed as a valuable resources which is often rare, inimitable and non-substitutable (Barney, 1991) hence human capital creates competitive advantage which leads to performance. In particular specific human capital is important to any business,because they cannot be duplicated nor substituted.

Since businesses owned by women are managed by the individual owner, its success depends on the level of the owner's human capital.

2.2 Enterprise Performance

Enterprise performance implies attributes that demonstrate alteration in degree of activities in physical size. Performance seems to be conceptualized, operationalized and measured in different ways. The concept reflects the degree to which an enterprise is able to identify and follow progress according to its business objectives (Kim, Cenfetelli & Benbasat, 2012). Business performance could be measured using financial or non-financial criteria. Although financial measures are often considered to be the most appropriate measure of business performance, most small businesses enterprise owners are motivated to start business on the basis of other non-financial criteria. Their performance will therefore be measured based on their goals (Walker & Brown, 2004). Financial measures are simple and easy to compute but suffer a serious shortcoming, especially with regard to small businesses they are not readily available to the public and are subject to manipulation (Chong, 2008). Financial measures include profits, revenue, return on investment and return on equity. Another alternative is to employ non-financial measures, but non-financial measures are subjective (Chong, 2008), however they have been found to motivate small business owners rather than financial measures. Examples of non-financial measures are satisfaction with the way the business is progressing and work- family balance. This study adopts financial and non- financial measures to examine the influence of human capital on performance of women owned enterprises.

2.3 Human capital

Rodrigeuze and Loomis (2007) describe human capital as the knowledge, skills, competences and attributes in the individual that facilitates the creation of personal, social or economic wellbeing. Human capital can be divided into general human capital and specific human capital. General human capital is defined as generic knowledge and skills not specific to task or organization usually accumulated through education and work experience. General human capital is easily transferable from one job to another and comes from education and work experience (Ganotakis, 2012). While specific human capital such as related experience is not transferable.

2.4 Human capital and performance

There has been wide difference in the level of influence of human capital reported in different studies. Unger, Rauch, Frese nad Rosenbusch, (2011) attribute these variations to differences in conceptualization of human capital and the differences in performance indicators chosen by the researcher. In addition there are contextual differences among studies as well as the presence of moderator variables.

The study by Ganatokis (2012) and that of Colombo and Grilli (2005) examined the relationship between founders general and specific human capital and growth of new technology based firm (NTBF). Results from both studies indicate that specific human capital is more important than general human capital and experience in same industry is more significant than experience in other fields. These two studies share contextual similarities both are on new technology based firms.

Likewise, studies conducted in developing economies came up with similar results. For example Urban and Kongo, (2015), examine the relevance of human capital on performance in retail industry in Kinshasa, DRC, their result indicated that education and working experience were related to performance. Fatoki, (2011), also studied the effect of human, social and financial capital on SMEs in South Africa and found all variables of human capital significant. Similar results were reported by Okafor (2012) in Nigeria.

A few studies on women owned enterprises also found a positive link between the two constructs. Coleman, (2007) used data from US federal reserve 1998 survey of small business finances found that unwillingness to apply for loan negatively affect profitability. The study also found that prior industry experience was a better indicator of performance for women than for men. This is an indication that this form of human capital is particularly important in growth of women-owned enterprises. Studies by Kessy and Temu (2010), Msoka (2013) and Mwaura, Gathenya & Kihoro (2015) all found that skill acquisition is significantly related to performance of women-owned enterprises.

On the contrary, the study conducted by Davidson and Honig (2003) in Sweden to examine the role of human capital on nascent entrepreneurs, binomial logistic regression results revealed that entrepreneurial skills only predict entry into nascent entrepreneurship but is not related to business performance.

Human capital obtained through education, working experience, industry specific experience and training will prepare the entrepreneur to face the challenges of business ownership, hence, it is suffice to say that a woman who is high on these variables is expected to experience better business performance. Also, the RBV posit that performance may be best explained through the resources, assets and knowledge available to the entrepreneur. However, the studies reviewed revealed inconsistent findings hence, there is need to further examine the subject in the context of women owned micro and small enterprises in Northern Nigeria.

3.0 METHODOLOGY

This section deals with the methodology chosen for the research.

3.1 Research Design

This study adopted the quantitative research approach. The study also adopts a cross-sectional survey as a means of examining the influence of resources on the performance of women-owned enterprises in Northern Nigeria. The instrument of data collection is a structured questionnaire adopted from prior studies with a five point Likert scale ranking.

3.2 Population of the study

The population of the study is the entire women owned micro and small businesses in Northern Nigeria. The sample was drawn from a list of associations of viable women small scale businesses that are registered with the Ministry of Women Affairs and Social Development. Three states were selected and the study focused on the state capitals. Kaduna has 141 women association with 1407 members, Bauchi has 58 women associations with 532 members and Lafia has 47 registered associations with 455 members. A total 2394 members formed the population of the study. Out of which 342 women were sampled. The sample was proportionately selected based on the size of the population in the three states.

3.3 Sample size and sampling technique

A multistage, cluster, proportionate, random sampling technique was used. This technique is a probability sampling technique. The sample size of 342 was proportionately selected to reflect the size of the population. The figure was determined using Israel, (1992) formula for determining sample size.

3.4 Techniques and tools for data analysis

The study adopted the Partial Least Squares Structural Equation Modeling, (PLS SEM) technique for analyzing the data. There are two main components in SEM, the structural model and the measurement model (Hair, Hult, Ringle and Sartedt 2014; Wong, 2013). The structural model also known as the inner model shows the potential causal relationships between the exogenous and endogenous variables and is used for hypotheses testing. While the measurement model or outer model shows relationships between latent variables and their indicators, the measurement model is used for model validation. Smart PLS 3.0 software was used to analyze the data.

3.5 Variables and measurement

The measure of the variable business performance was adopted from prior studies. Specifically, the variables used to measure business performance in this study are profits (Colemann, 2007), sales revenue (Delmar, Davidson & Gartner, 2003), number of employees (Altinay & Altinay, 2006) and one non-financial measure which is, satisfaction with the progress of the business (Walker & Brown, 2004).

Human capital is measured using the following variables; education, working experience prior to starting a business, related experience in similar business, managerial experience, business training adapted from Fatoki (2011).

4.0 ANALYSIS AND RESULTS

The aim of the study is to examine the influence of human capital on the performance of women owned enterprises. The study followed the two steps approach suggested by Chin (1998), this approach ensures valid and reliable results. The approach involves first confirming the constructs reliability and validity (assessment of the measurement model) before proceeding to test the hypothesis (assessment of the structural model).

4.1 Data cleaning

A number of issues must be addressed before proceeding to model evaluation in PLS-SEM.

Issues like missing data cases, outliers, and suspicious response pattern (straight lining and inconsistent answers) and data distribution (Hair et al, 2014). For this study a total of 342 questionnaires were distributed to women entrepreneurs in the study area and 280 were returned (82 percent). Out of this 236 was used for the analysis after taking care of missing data cases, outliers and suspicious responses. Smart PLS 3.0 version takes care of missing data cases automatically.

4.1 Assessment of the measurement model

This section presents the result of the reliability and validity of the model.

4.1.1 Indicator reliability

Indicator reliability is measured by the indicators outer loadings and it refers to the level of association between the indicators. A high outer loading implies that the associated indicators have much in common and can be said to be related. Hair et al.,

(2014) recommend that all outer loadings should be statistically significant. Conventionally the value of indicator outer loading should be 0.7 or higher. However, Henseler, Ringle and Sincovics (2009) offered 0.4 as a lower limit and recommended that any item with outer loading of less than 0.4 should be deleted from the measurement scale. In addition, Hair et al., (2014) recommend that an indicator with outer loading of between 0.4 and 0.7 should be considered for deletion from the measurement scale only if deleting the indicator results in the improvement of composite reliability and Average Variance Extracted (AVE) of the measurement model.The construct human capital was left with four indicators (HC01, HC03, HC05 and HC06), three of the four indicators reflecting performance (dependent variable) were 0.7 however, one loaded just above 0.4,this indicator was left in the model because it was discovered that deleting it from the model resulted in a lower AVE for the construct. Moreover, all the indicators loaded significantly with all*t*-values above 1.96 as indicated in table 1.

Table 1: Indicators t-value results

Constructs	Items	Loadings	Standard error	t-value
Performance	PV01	0.85	0.04	21.195
	PV02	0.849	0.044	19.461
	PV03	0.422	0.081	5.196
	PV04	0.813	0.035	23.124
Human capital	HC01	0.685	0.201	3.404
	HC03	0.791	0.159	4.99
	HC05	0.813	0.139	5.852
	HC06	0.695	0.191	3.644

4.1.2 Internal consistency reliability

According to Nunally and Beinstein (1994) as cited in Hair et al. (2014), composite reliability should be above 0.70 although they suggested that a composite reliability of 0.60-0.70 is acceptable in exploratory research. However a composite reliability of less than 0.60 is unacceptable as it suggest a lack of internal consistency reliability. In this study the composite reliability for human capital (0.835) and performance (0.834) are all above the threshold of 0.7. Similarly their corresponding Cronbach's

Alpha coefficients are above the threshold of 0.7 as indicated in table 2

4.1.3 Convergent validity

Convergent validity is the extent to which there is an agreement among several indicators in measuring the same construct (Hair et al., 2014). The AVE is the total average of the squared loadings of the indicators connected with the latent variable. An AVE value of 0.5 or higher indicates that the construct explains not less than half of the variance of the indicator. As indicated in table 2 the two constructs have AVE values above the threshold of 0.5.

Table 2: Summary of Measurement Model Results

Constructs	Items	Loadings	Cronbach's Alpha	CR	AVE
Performance	PV01	0.851	0.724	0.834	0.571
	PV02	0.849			
	PV03	0.437			
	PV04	0.805			
Human capital	HC01	0.688	0.759	0.835	0.56
	HC03	0.793			
	HC05	0.809			
	HC06	0.697			

CR- Composite Reliability, AVE- Average Variance Extracted.

4.1.4 Discriminant validity

Discriminant validity refers to the extent to which indicators differentiate the construct it is associated with from other constructs in the model (Hair et al., 2014). This study followed the Fornell and Larcker (1981) criteria. The criterion recommended that for discriminant validity to be confirmed the square root of AVE for a particular construct must be higher than its correlation with any other construct in the model. Table 3 shows that discriminant validity for this model is confirmed.

Table: 3 Disciminant Validity using Fornell and Larcker criteria

	HC	PERF.
Human capital	**0.748**	
Performance	0.168	**0.756**

HC- Human Capital, PERF.. – Performance.

4.2 Assessments of the structural model and hypothesis testing

Having validated the measurement model by confirming its reliability and validity the next step is to test the hypothesized path using the bootstrapping process in Smart PLS 3.0.

Table 4: Results of Hypotheses Testing

Path /Relationship	Std beta	Std error	*t*-value	*p*-value	Decision
Human capital -> Performance	-0.01	0.073	0.146	0.98	Not supported

As shown in table 4, the path coefficient between human capital and performance was found to be insignificant at 95 percent confidence interval (β=- 0.011, t=0.146).

4.0 Discussion

In this study it was found that human capital did not influence performance of women-owned enterprises. The hypothesized relationship in this path postulates that human capital positively influence performance of women-owned enterprises, however this hypotheses did not receive statistical support (β = -0.011, t =0.146,). It was expected that human capital of women owner managers will positively influence performance however the result suggests the contrary. This finding contradicts the findings of previous studies (Coleman, 2007; Fatoki, 2011;Mwaura et al, 2015; Msoka, 2013). On the other hand the findings of this study is consistent with the findings of Davidson and Honig (2003) who examined the role of human capital among nascent entrepreneurs and found that certain aspects of human capital predicts entry in to nascent entrepreneurship but are not related to business performance.

One rational explanation for the negative influence maybe related to the context of the study. Majority of the women in the survey are engaged in micro businesses and their level of sophistication is very low, therefore, they require less human capital input to be successful. Furthermore Unger et al. (2011) in a meta-analysis on the influence of human capital and entrepreneurial success reported that there is a wide variation of reported influence of human capital on performance. They attributed these variations to factors such as the conceptualization of human capital, the performance indicator chosen and the context of the individual study, therefore, this finding is not isolated.

With regard to the variable the study reveals that educational level, work experience and business training are important indicators of human capital because they loaded high with 0.688, 0.793, and 0.809 respectively. Although in general high level of human capital can influence performance positively this is not true for women-owned micro and small businesses in this survey. Even though women enterprise owners in this survey found human capital not influential they still found that their businesses are performing. Therefore, for this study area improvement in human capital will not bring about significant improvement in performance. Hence to answer the research question this study reports that human capital does not influence performance of women-owned enterprises in Northern Nigeria.

5.0 CONCLUSION AND RECOMMENDATIONS

The result revealed that human capital hasno significant influence on the performance of women- owned enterprises, as it lacks statistical support. Therefore, in order to improve performance women owner/ managers should place less emphasis on human capital and intensify efforts in acquiring other resources in the RBV context. This study adds to literature and theory on RBV of the firm by customizing the RBV of firms to examine the extent to which human capital influences the performance of women-owned micro and small businesses in Northern Nigeria since there is a dearth of RBV studies on micro and small businesses.

This study found that human capital has no significant influence on performance of women owned enterprises. Further studies are encouraged to test the influence of other resources on performance of women owned enterprises. In addition, this study used a cross-sectional survey method to examine the influence of human capital on the performance of women-owned enterprises. A longitudinal survey is recommended in future to examine the influence of human capital on the performance of women-owned enterprises.

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PHILLIP'S CURVE DYNAMICS AND NIGERIAN HOUSING MARKET

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Abstract

The Nigerian housing market has been facing the plethora of problems which are mainly exogenous. This study was thus motivated by the need to look at how this market has thrived as it concerns the impacts of inflation and unemployment therein. ARDL was employed in the analysis. Other test results confirmed a long run relationship between housing market as proxied by real estate output, inflation, unemployment and interest rate the period of 1980 – 2017. The study found that inflation and unemployment rate have a positive but insignificant impact on the housing market while interest rate has a negative but significant impact on housing market in the short-run. Based on the foregoing findings, it was thus strictly recommended that government should pursue monetary policies that will reduce the rate of interest especially on mortgage loans to improve investments in the industry/ housing market. They should equally encourage improved building materials production to facilitate adequate and decent sheltering of the people.

Key words: Phillip's curve, Inflation, Unemployment, Interest rate, Housing, Housing market.

JEL CODES: E31, E43, J64, R20, R31

INTRODUCTION

The effect of macroeconomic variables like inflation and unemployment has been of immense concern to governments across the world especially that at the nationallevel. This is because they bear largely on socioeconomic outcomes of the

economy concerned. Hence, their close monitoring by these governments, firms and households. (Khalid *et al*, 2012). Further, The Phillips Curve posits a negative relationship between unemployment and inflation rates. It implies that a persistent increase in inflation will lead to reduced unemployment and conversely, if price starts to drop consistently that unemployment will increase over time. (Lui; 2009).

In the view of Ebie (2014), housing market is a complex market as just as housing as a product that is crucial for individuals' welfare and national development. The housing sector is a source ofcapital formation, employment and income generation. Investments in this sector spur demand for labour in construction and building materials markets and increases income levels by the multiplier. Expenditure on housing, on the average, accounts for between one-seventh and one-fifth of all consumer expenditures in developing countries. (Chatterjee; 1981). For most households, this investment is one of the primary objectives for savings especially when inflation and unemployment are accounted for using the Philip's curve (Jinadu; 2015).

The rapid rural -urban migration and slight economic boom in the last decade gave rise to increased demand and rent for residential houses and office space in urban areas of Nigeria (Nzalu;2012, Wisniewski;2011). Wisniewski (2011) opined that changes in real estate market are subject to impulses depending on the prevailing financial and economic circumstances in the economy concerned. According to Lynn (2007) since macro-economic factors affect each other, and are usually correlated a change in each will have an aftermath effect with the economy being the most affected. It thus necessitates an investigation of the effects of inflation and unemployment on the housing market in Nigeria and proffer solutions.

Chatterjee (1981) opined that improved housing markets, impact positively on other socially beneficial goods like education, health and social pathology. This is bearing in mind the opportunity cost of the investments. Further, mosthousing projects have high labour-capital ratio, thus can boostlabour employment than capital. This has become important in countries with high rural- urban migration and unemployment rates. Also, the attribution of socio-economic benefits to housing has spurred studies that tried to investigate the effect of housing investment on worker productivity and welfare. (Spiller; 2013, Nnaemetu etal ;2015).

Uwazie et al (2014) submitted that housing policies and programmes should be based on the belief that housing needs of target population would be met and their socio- economic status and physical living conditions improved. The question that will naturally pop up here will be; to what extent has these efforts met its goals in Nigeria?

Early official intervention in housing started in Lagos from 1928 colonial intervention till 1979 which only succeeded in providing houses for colonial masters and few fortunate locals with erection of housing quarters in other areas like Kaduna, Ibadan and Enugu. (Olutuah and Babadoye, 2009; Abdulahi, 2010; Eziyi, et al 2011; Mustapha, 2012). Between1980 and 2000AD the National Housing Programmes (NHPs) equally failed in achieving its goals and failed at the desirous 'Housing for All by the Year 2000A.D'.(Ogunrayewa and Madaki; 2010, Agboola; 2012). Also, Post millennium NHPs and the national transformation agenda (2011 -2015) faced challenges that constrained governments to go for a private sector led housing delivery while providing market incentives and basic infrastructure as enablers in housing delivery efforts. These equally failed to the prevailing market and macro dynamics and other factors (Mustapha, 2012; Ebie, 2014; Ali, 2016). These goes contrary to the judgment of Uwazie at al (2014) and has led to housing deficits and its high prices/rent which diverge greatly from the earning of an average worker.(Aribigbola 2008; Ezeyi, et al, 2011; Akinlusi 2013)This study thus intends to establish the extent to which the selected macro dynamics affected the housing market.

Further, previous studies emphasized on the individual and joint impacts of inflation and unemployment on economies of their choice countries but here is a draught of research work that specifically attempted to establish how the twin problems of inflation and unemployment have simultaneously affected the housing market in Nigeria. This will be the gap which the study will hopefully fill in its course. This study will be of great benefit to stake holders in the industry and other related ancillary industries by guiding policy/ investment decisions especially in Nigeria. It covers between 1981 and 2017 an era that witnessed majority of the national housing policies.

REVIEW OF RELATED LITERATURE

Olowofeso and Oyetunji (2013) opined that interest rate is an important variable that influences housing investment decisions. When mortgage rate increases, people are

prevented from buying houses; therefore, the demand for housing decreases. It   has also been argued that significant interest rate effects on consumer expenditure are expected through housing wealth. (Muellbauer,1992; Muellbauer and Murphy, 1997). Aside money supply, other variables like employment and mortgage interest rates, affect both housing prices and the construction of new ones (Olowofeso and Oyetunji, 2016).

Ume (2014) studied relationships between unemployment, monetary policy and housing market in USA. He used a model of search and bargain across labor and housing markets and found housing prices and frictions in the housing market to have a profound impact on labor market via the desire of workers to later purchase a home.

Essays, UK. (2013) examined the effects of inflation rate, interest rate and unemployment on the U.K housing market index. It used the multiple regression on quarterly data to   find that inflation and unemployment effect on the U.K housing market demand were negative and statistically significant while that of rate of interest rate   was equally negative but insignificant.Cho (2005) studied interest rate and inflation effect on house price relative to chonsei price. Chonsei refers to the lump-sum deposits tenants make to the land lord without periodic rent payments. The study found that the relative selling price to Chonsei depends on ratio of inflation and real interest rates too.

Zhu, (2013) studied the nature of relationship between unemployment and house prices in UK property market. It constructed a model of house prices against supply and demand variables as used in other research. Using OLS, it found no real relationship in regional house price sensitivity to unemployment and relative income levels of a region. Odoh, et al (2017) investigated the relationship between unemployment and inflation in Nigeria from 1980-2015. The model specified unemployment as a function of inflation, money supply as a percentage of GDP, total government expenditure as a percentage of GDP. Using VECM test, co integration test, the study found that inflation significantly impacted negatively on unemployment in Nigeria both in the long run and short run.

Pallis (2006) studied the relationship between inflation and unemployment in EU with data of 1994 to 2000 on "the price deflator of GDP at market price, wage level, employment rate. Using nonlinear least square method, it found that use of common policy in the entire EU economy could lead to some questions due to the varying

impacts of the said policies regarding unemployment and inflation. Pallis (2006) may apply in a large economy and multi national state like Nigeria where some regions are facing differences in unemployment and inflation levels which the housing market in these regions cannot shield its self from. It may call for region centric policy mix in approaching the challenges that may arise therefrom.

Mallik et al (2011) and Sweidan (2014)examined the short-run and long-run dynamics of inflation and economic growth for South Asian economies and Jordan respectively. Using ECM, they found a significant positive relationship between inflation and growth for all the countries with smaller growth sensitivity changes for inflation rates a little above 2%.   This implies that moderate inflation fosters economic growth while faster growth rate absorbs inflationary tendencies. Okafor (2011) examined how unemployment affects economic growth. Using OLS technique it found a negative relationship. The uniqueness of the study comes from its pointing out of the labour force constitution problem especially in countries like Nigeria where people below 18 years are employed in different forms of child labour and most above 60 years are still productively employed as part of the labour force. These groups of people are erroneously excluded statistically in data collected for estimates of labour force value.

Olu and Idih (2015) studied inflation and economic growth in Nigeria form 1980 to 2013. OLS was used to analyse data on GDP, inflation, exchange rate, labour and Capital inputs. The result indicates a negative relationship between inflation and economic growth. This suggests ineffectiveness of the monetary policies used at tackling inflation in Nigeria. Generally, In relation to inflation on value of assets, Ibbotson and Siegael (1995) found real estate to compensate investors for inflation risk when added to mixed-asset portfolio. The changes in this value overtime (above or below inflation rate) represent the real growth rate.

The studies reviewed above have some inadequacies which draws from the fact that some of them looked at the individual impacts of inflation and unemployment on economic growth without narrowing them to the housing market. (Mallik (2011) Okafor (2011), Olu and Idih (2015) while some equally did attempted a joint impact analysis without still narrowing them to the housing market (Pallis (2006) Odoh, et al (2017)). Furthermore, some others came close to the housing market but did not do a joint analysis of inflation and unemployment. (Zhu;2013,Umeh;2014). Olowofeso and Oyetunji (2016) did came close to housing market but had residential property prices as the dependent variable and other more explanatory

variables which includes GDP, interest rate, exchange rate but focused its scope to only Lagos state. Essays ,UK did for housing market too but has the UK housing market as its focus. This focal cum directional differences thus presents a gap which the present study intends to fill by holistically analyzing the inflation-unemployment dynamics while including interest rates on the Nigerian Housing market from 1980-2017. This in the view of the researchers is where the study draws its novelty from.

METHODOLOGY

Theoretical framework

This study is built upon the Augmented Philips curve model ofPhilips (1958). Stated as

$$INFt = \beta0 + \beta1 UNPt + Ut \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

The failures of the original Philips Curve due to fluctuations in inflation because of vagaries of exchange rate, oil prices, etc gave rise to augmented Phillips curve to and is specified as:

$$INFt = \beta0 + \beta1 UNPt + \beta2 INFexp + Ut \dots\dots\dots\dots\dots\dots\dots\dots (2)$$

Model specification

The functional form of our model will adopt Real-Estate Output (REO) as dependent variable and inflation, unemployment and mortgage lending rates as independent variable as below:

$$\textbf{REO} = f(\textbf{REO}_{t-n,} \textbf{INF}, \textbf{UNE}, \textbf{INT}) \dots\dots\dots\dots\dots\dots\dots\dots\dots (3)$$

Where, **REO** = Real-Estate Output (proxy for housing market); **INF** = Inflation rate.

UNE = Unemployment rate; **INT = B**ank Lending Rate (Proxy for Mortgage Bank Lending rate)

$\textbf{REO}_{t-n}$ = Lag values of Real Estate Output. In *econometric form, the model is transformed to be:*

$$\log REO_t = \beta_0 + \beta_1 \log REO_{t-n} + \beta_2 INF_t + \beta_3 UNE_t + \beta_4 INT_t + u_t \dots\dots\dots\dots\dots\dots (4)$$

u: Stochastic error term   t: Time period

β_0: Intercept/constant term.   Log: Natural Logarithm

$\beta_1, \beta_2,$ and β_3 are the regression coefficients. A priori Specification: $\beta_1 > 0$, $\beta_2 ? 0$, $\beta_3 ? 0$ $\beta_4 ?$ 0

Estimation Technique and Procedure

Error Correction Model (ECM) technique within the Auto Regressive and Distributed Lag (ARDL) Model estimation was employed. This is to account for the explanatory potency of the regressors in the short and long run and ascertain the dynamics of attaining long run equilibrium which vital for studies relating to macro variables like inflation and unemployment rates.

DATA ANALYSIS AND RESULTS

Unit root test: Augmented Dickey Fuller –ADF was elected for the stationarity test.

Table1: ADF test results

Variable	ADF Stat.	5%Critical Values	Order of integration	Level of Significance	REMARK
LREO	-3.168351	-2.948404	I(1)	5%	Stationary at first difference
INF	-5.591726	-2.948404	I(1)	5%	Stationary at first difference
UNP	-7.594023	-2.948404	I(1)	5%	Stationary at first difference
INT	-5.141732	-2.951125	I(1)	5%	Stationary at first difference

Source: Author's compilation using Eviews 9

Table1 above presents the ADF test result showing all variables to be integrated of order one [I(1)] and can be used to examine the short run linkage within the system.

Co-integration test results

Because stationarity was gotten at 1st difference the johansen test for cointegration will helps us to identify whether this variables converge in the long run as seen in Table 2 below.

Table 2: Johanson co integration test result

Unrestricted Cointegration Rank Test (Trace)				
Null hypothesis	**Eigenvalue**	**Trace Statistic**	**0.05 (5%) Critical Value**	**Prob**
None *	0.626444	65.06641	47.85613	0.0006
At most 1 *	0.341717	31.58708	29.79707	0.0308
At most 2 *	0.295593	17.37100	15.49471	0.0258
At most 3 *	0.148293	5.457439	3.841466	0.0195
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Null hypothesis	**Eigenvalue**	**Max-Eigen Statistics**	**0.05 Critical Value**	**Prob**
None *	0.626444	33.47933	27.58434	0.0078
At most 1	0.341717	14.21608	21.13162	0.3476
At most 2	0.295593	11.91356	14.26460	0.1139
At most 3 *	0.148293	5.457439	3.841466	0.0195

Source: Author's compilation 2018 using eviews 9.

The result of the Johansen co-integration presented above in table 4.2 was carried out assuming linear deterministic trend in co-integrating equation. The trace test indicates 2 co-integrating equation at 5% significance level. *This implies that there exist a long-run equilibrium relationship exist between real estate output and the chosen explanatory variables.*

Since the cointegration test identifies at least one long run equation to define the relationship among the three variables we will expect that the short run equation (The system of equations that are regressed using the 1st difference of the variables) have a long run relationship which the error correction model will define. Thus, the VAR form of the model would be the Error Correction Model (ECM) as expressed in the methodology in equation.

$$Y_t = \emptyset_0 + \sum_{t=1}^{2} \emptyset^t Y_{t-1} + \sum_{t=1}^{2} \emptyset^t e_{t-1} + e_t$$

The Granger causality result

In the Granger Causality test, we observed the direction of cause-effect relationship among variables. This provides the basis for determining which variable provide the lead for responses by other variables. The Granger causality test results below showssignificant F-probability value, at 0.05 level of significance implying that the

null hypothesis will be rejected and the alternative accepted.

Table 3: Granger causality test results

Null Hypotheses	F-Statistic	F-prob	Decision
INF does not Granger Cause LREO	1.66742	0.2058	Accept {H_0}
LREO does not Granger Cause INF	4.55612	0.0187	Reject {H_0}
UNP does not Granger Cause LREO	0.19038	0.8276	Accept {H_0}
LREO does not Granger Cause UNP	3.39716	0.0468	Reject {H_0}

The results above shows that the null hypothesis of causality running from INF to LREO would be accepted but the reverse will be rejected and conclude that inflation does not granger causes real estate output but the reverse causality holds.The null hypothesis of causality running from UNP to LREO would be accepted whereas the reverse will be rejected and that LREO granger causes UNP. This indicates a one way causality running from real estate output in Nigeria to inflation and unemployment.

Table 4: Estimated model result

Variable	Coefficient	t-statistic	Prob.
C	-0.140112	-1.288172	0.2090
DLREO(-1)	0.974832	55.16279	0.0000
DINF	0.001269	0.624372	0.5378
DINF(-1)	0.003710	1.772967	0.0878
DINF(-2)	-0.003409	-1.587950	0.1244
DUNP	0.001249	0.222716	0.8255
DINT	-0.023593	-2.867845	0.0081
DINT(-1)	0.033177	3.523155	0.0016
INT(-2)	0.015417	1.740913	0.0935
ECM (-1)	-0.025168	-1.424169	0.1663
R-Squared: 0.998248; **Adjusted R-squared:** 0.997708; **F-statistic: 1851.377**;			
Prob(F-statistic): 0.000000; **Durbin-Watson Stat:** 1.583776			

Source: Author's Compilation (using E-View 9 Output) (2018).

The results in table 4 denote the ARDL error correction regression. The differenced variables' coefficients represent short run effect of these variables on the dependent variable. It shows that our model has a high coefficient of determination as can be seen from the R-squared of about 99.8 percent and the adjusted R-squared of about 99.7 percent showing a good data fit.The F-statistic is 1851.377 with probability of 0.000000 which is less than 5%, showing statistically significance of the model at

5% level. Thus, all the explanatory variables jointly explain variations in the dependent variable (LREO).

The coefficients of the explanatory variables show that all the explanatory variables conform to a priori specification except for INF, INF_{t-1}, UNP, INT_{t-1}, and INT_{t-2}. The first lag of real estate output, interest rates and first lag of interest rates all have statistically significant impact at the conventional 5% level on the value of real estate output in Nigeria; whereas unemployment rates, second lag of interest rate, and inflation at all lags do not have statistical significance on the present value real estate output at the conventional 5% level. This implies that a unit increase in $LREO_{t-1}$, INF, INF_{t-1}, UNP, INT_{t-1}, and INT_{t-2} leads to a 97%, 0.1%, 0.4%, 0.1%, 3.3% and 1.5% increase in real estate output respectively. On the contrary, a unit increase in the second lag of inflation and prevailing interest rate leads a 0.3% and 2.4% decrease in real estate output respectively. This implies that the prevailing inflation and unemployment rate dynamics have fueled real estate output (housing market) in the economy during the period under study.

The Durbin-Watson statistic is 1.583776 indicating no autocorrelation which makes our model reliable for inferences. The coefficient of the error correction term of about -0.025168 is statistically insignificant at 5% level with the expected negative sign. The insignificant error term with the right sign (-) indicates a weak feedback effect of deviation of the real estate output from its long run growth path. The coefficient -0.025168 of the error term shows that about 2.5percent of the discrepancies between the actual and the equilibrium value of the housing market is corrected in each period. This shows a slow speed of adjustment.

Hypothesis testing

Hypothesis one:

H_O: Inflation does not have any significant effect on real estate market in Nigeria.

H_1: Inflation has a significant effect on real estate market in Nigeria.

The regression result in table 4 shows that inflation rate (INF) does not have a significant impact on real estate output (REO). Therefore, we accept the null hypothesis and agree that inflation does not have significant effect on real estate market in Nigeria.

Hypothesis two:

H_o: Labour unemployment does not have any significant impact on Nigeria's real estate market.

H_1: Labour unemployment has a significant impact on Nigeria's real estate market.

Table 4 shows that unemployment rate (UNP) does not have a significant impact on real estate output (REO). Therefore, we accept the null hypothesis; that labour unemployment does not have a significant impact on Nigeria's real estate market.

SUMMARY, RECOMMENDATIONS AND CONCLUSION

Summary of research finding

This study evaluated the Philips curve dynamics on the Nigerian housing market from 1981 to 2017. ECM was used to test the impact of the subject of our interest. Before applying the regression analysis, we established stationarity of the variables via ADF test and the variables were stationary at first difference. The Johansen co-integration test indicated four and one cointegrating equation at 5 percent level of significance indicating that the variables have a long run relationship. Granger causality test indicate existence of one way causality flowing from real estate output to inflation and unemployment in Nigeria. Other findings of this study include:

1. Inflation has a positive and insignificant impact on the housing market in Nigeria implying that inflation contributes positively though insignificantly to Real Estate output.

2. Unemployment has a positive and insignificant impact on the housing market in the short-run implying that unemployment rate positively impact the market but insignificantly. This unusual positive relationship in Nigeria was also found by Aliyu (2012), Sanusi et al (2017) and Akinyemi et al (2018).

3. Lending interest has a negative but significant impact on housing market in Nigeria implying that the lending rates adversely affect the housing market significantly.

Recommendations

Based on the above findings, we proffer recommendations as viz:

1. Given the necessity of housing and the significant adverse effects of lending interest rate on housing markets, the national government should lure the bigger banks to charge concessionary lending rate to estate developers.

2. Since real estate growth is mostly private sector driven, government should augment the efforts of the investors by subsidizing building material production.

3. The federal mortgage bank should offer less stringent loans to Small private home developers.

Conclusion

This study reviewed the Philips curve in relation to the Nigerian housing market from 1981to 2017. This is due to impact of inflation and unemployment on the general economy which the housing market is part of. The study's novelty lies in the revealed queer peculiarity of inflation-unemployment relations with changes in the housing market. Conclusively, inflation has a positive and insignificant effect on the housing sector. In the same vein, unemployment has a positive but insignificant impact on the housing market. The study discovered that lending rate of interest is the major determinant of output in the housing market which stakeholders can influence to bring activities in the housing market (real estate output).

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MEDIATING ROLE OF MARKET ORIENTATION ON THE ENTREPRENEURIAL ORIENTATION AND BUSINESS PERFORMANCE RELATIONSHIP: A REVIEW OF LITERATURE

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Abstract

The concept of entrepreneurial orientation came to limelight about 30 years ago as a central variable within the strategic management and entrepreneurship literature and has been given considerable academic interest. The aim of this paper is to review literature on the relationship between entrepreneurial orientation and performance for the purpose of extending research on the subject by proposing a mediating effect model. The paper is a review and data was obtained through searches for peer reviewed journal articles on the World Wide Web using the search term "entrepreneurial orientation and performance, market orientation". The review was restricted to empirical studies; non-empirical studies were discarded. However, selection of articles was not restricted to any specific journal, this is to make the review as comprehensive as possible. The review revealed inconsistencies in empirical results reported by scholars. The paper proposed that market orientation mediates the relationship between entrepreneurial orientation and performance. Entrepreneurial orientation is a research area that provides ample opportunity for researchers willing to contribute to the field of entrepreneurship and strategic management. In addition, exploring the entrepreneurial orientation – performance link has practical implications for business managers in view of the competition faced by businesses.

Keywords: Business Performance, Entrepreneurial Orientation, Market Orientation, Mediation, Review

1 INTRODUCTION

The concept of entrepreneurial orientation which will be referred to as EO in this study came to the lime light as a result of the seminal work by Miller in 1983. Since then the concept has received considerable amount of literary interest from researchers in the area of entrepreneurship and strategic management (Rauch, Wiklund, Lumpkin & Frese, 2009). EO is an important variable in the field of strategic management and entrepreneurship and it reflect organizations top management's inclination toward innovativeness, proactiveness and risk taking (Miller, 1983).

Generally, a positive relationship exists between EO and firm performance (Lumpkin & Dess, 1996; Milovanovic, & Wittine, 2014; Pratano, & Mahmood, 2016; Radipere, 2014; Rauch et al, 2009). EO is an important resource under the Resource Based View, which will be referred to as RBVhenceforth in the study. Instrategic management the RBV has been used to explain performance differential between businesses in the same industry. Moreover, performance is the most important outcome variable in strategic management (Covin & Slevin, 1991).

However, the relationship between EO and performance is not straightforward, there have been inconsistencies in the findings reported by scholars. Some studies found a positive link (Lumpkin & Dess, 1996; Milovanovic, & Wittine, 2014; Radipere, 2014; Rauch et al, 2009) one study found no significant link at all (Messersmith & Wales, 2011) nevertheless a few studies found curvilinear relationship (Dai, Maksimov, Gilbert & Fernhaber, 2014; Su, Xie & Li, 2011; Tang, Tang, Marino, Zhang & LI, 2008; Wales, Patel, Parida & Kreiser, 2013).

Studies have shown that there is very small understanding of EO in developing countries as most studies are carried out in the US and other developed countries (Tang et al, 2008; Wales, Gupta & Mousa, 2011). Also in recent times, scholars have shifted attention from examining only the direct relationship but also exploring contingency relationship in the study of EO- performance link. Furthermore, calls for further studies (Wales, Gupta & Mousa, 2011) have suggested the use of moderators and mediators in understanding the link between EO and performance. The role of moderators has been extensively explored by researchers while

mediation model in spite of its importance have received less attention. Mediation models are essential because they help us in establishing contributory relationship between EO and its outcome and explain why a specific relationship is plausible (Baron & Kenny, 1986).The study of EO and performance link is timely and of practical implication to business owners in view of the competition faced by businesses.

A review of extant literature showed that although entrepreneurial orientation and market orientation influence performance and a number of scholars have explored the interaction between the three constructs (see Aljanabi & Noor, 2015; Amin, Thurasamy, Aldakhil, & Kaswuri, 2016; Vega-Vazquez, Cossio- Silva & Ravilla-Camacho, 2016; Yu, Nguyen & Chen, 2015) there is limited studies on the mediation role of MO on the relationship between EO and business performance in the African context. The authors are motivated to contribute to the stream of research on the subject in Africa. Therefore,the purpose of this study is to review and analyze extant literature on the relationship between EO and performance and mediating variables.As a result of the gap found in the literature the study also extends research in the area by proposing a model which incorporates market orientation as a mediator in the complex EO-performance relationship.

2.0 LITERATURE REVIEW AND THEORETICAL / CONCEPTUAL FRAMEWORK

This section deals with a review of literature, definition of concepts, theoretical framework, empirical review and conceptual framework.

2.1 Theoretical Framework

The theoretical background for this study resides in the Resource Based View (RBV) and the Contingency Theory.The RBV is an important theory in the field of strategic management, and rests on the argument that businesses compete on the basis of the resources and capabilities that is internally available to the firm or that the firm can access and these resources and capabilities have the potential of providing competitive advantage and subsequently superior performance (Barney, 1991). A resource is a generic term that connotes tangible or intangible assets such as physical resources, financial resources, human resources, capabilities, organizational processes and information. These resources if properly used will enable the firm to plan ahead and make strategies aimed at improving performance (Barney, 1991). In

strategic management literature the RBV has been used to explain performance differences between firms in the same industry (Newberts, 2007). EO and MO are unique organizational processes under the RBV and the effective and efficient combination of these two strategic orientations will lead to superior performance.

Contingency theory holds that the relationship between two variables depends on the level of a third variable, (Rauch et al, 2009). The contingency theory is based on the idea that 'congruence or fit' among key variables such as industry condition and organizational processes is critical for obtaining optimal performance (Lawrence & Lorsch, 1967) in addition, studies have shown that bringing together key variables can improve performance (Neman & Covin, 1993).

2.2 Business Performance

Performance is the operational capability to satisfy the aspirations of the organizations key shareholders (Smith & Reece, 1999). Business performance is a multidimensional construct and scholars have adopted objective or financial measures and/ or subjective or non financial measures. Traditionally business performance is measured in terms of objective or financial terms such as increase in turnover, profits, return on investment and increase in number of employees. However the use of non financial, subjective or lifestyle measures is becoming popular especially with regard to small businesses, for example measures like job satisfaction are becoming popular subjective measures of performance (Walker & Brown, 2004).

Obtaining objective financial data is difficult especially from small and medium enterprises therefore researchers are opting for the use of a combination of objective and subjective measures of performance. Scholars agree that considering only one measure may be misleading in view of the differences in objectives and motivation of owners of SMEs. The study by Zilkifli and Perera, (2011) substantiate the view that the use of subjective measure is acceptable as their result shows that subjective measures shows high correlation with objective measures. Therefore, in order to achieve more accuracy in measurement of performance the construct must be treated as a multidimensional construct and the integration of both objective and subjective measures offers greater advantages (Chong, 2008; Lumpkin & Dess, 1996).

2.3 Entrepreneurial Orientation

Entrepreneurial orientation emerged about thirty years ago as an important construct within the strategic management and entrepreneurship literature (Shirokova, Bogatyreva, & Beliaeva, 2015). It has also become the most widely adopted measure of entrepreneurial behavior. An organization's EO can be viewed as the extent to which the organizations top management is willing to adopt new and creative ideas, to be the first to make a move in relation to competitors and to take business risks (Covin & Slevin, 1991; Miller, 1983). EO has been found to create competitive advantage and subsequently superior performance (Barney, 1991; Keh, Nguyen & Nig, 2007; Lumpkin &Dess, 1996; Rauch, et al 2009). According to Rauch, et al (2009, p.6) *"EO is the entrepreneurial strategy making process that key decision makers use to enact their firms organizational purpose, sustain its vision and create competitive advantage".* EO has been referred to as a valuable resource under the resource based perspective which is related to firm's performance.

Miller (1983) in trying to conceptualize the construct arguedthat when a firmis involved in product market innovation, is willing to engage in business enterprise that are risky and is basically the first to come up with proactive innovations ahead of competitors, that firm can be said to be entrepreneurial. In contrast, a non entrepreneurial firm is very low in innovation or seldom innovates, is highly risk averse and imitates the move of competitors. Early researchers conceptualized EO in terms of three dimensions of innovativeness, proactiveness and risk taking (Covin & Slevin, 1989; Miller, 1983), however Lumpkin and Dess, (1996) came up with two additional dimensions of autonomy and competitive aggressiveness. This study adopts the three dimensional conceptualization of EO (Covin & Slevin, 1989; Miller, 1983).

2.3.1 Dimensions of EO

Innovation is an important component of entrepreneurship. Innovation is described as the process of "*creative destruction*" where wealth is created by the introduction of new products and/or services and as a result of which the current market is stalled causing a change in the way resources is used (Shumpeter, 1942). Innovativeness connotes the degree to which an individual or organization adopts new ideas relatively faster than others. Proactiveness as an EO dimension refers to the process of being ahead of competitors in seeking new opportunities in an unrelated line of operation. Proactiveness can come in form of introduction of new products and

brands. Proactive firms have initiatives; they take active part in the market rather than being passive observers, taking the lead while competitors follow. Proactiveness can help achieve competitive advantage when firm anticipate changes in future demand ahead of competitors (Lumpkin & Dess, 1996). Risk taking entrepreneurial behavior involves investing firm's resources in projects with uncertain outcomes.

2.4 Market Orientation (MO)

According to Narver and Slater, (1990, p.21*) "market orientation is the organizational culture that most effectively and efficiently creates the necessary behavior for the creation of superior value for buyers and thus continuous performance for the business".* In other word market orientation which will be referred to as MO henceforth is a behavior that involves doing things in a new or different way for the purpose of responding to situation in the market.

MO has been conceptualized as composing of three dimensions of customer orientation, competitor orientation and inters functional coordination, (Narver & Slater, 1990). Customer orientation entails search for information relating to customers present and future wants and needs with a view to provide them with better products and services. Competitive orientation has to do with knowing the strengths and weakness of competitors, in addition having insight and information about strategies adopted by competitors, lastly, inter functional coordination involves circulating these information among the department or subunits within the organization (Obeidat, 2016).

Similar to Narver and Slater, (1990), Kohli and Jaworski, (1990) conceptualized MO dimensions as intelligence generation, a process of collecting information related to customers. Intelligence dissemination which refers to knowledge sharing among the various units within the organization and lastly responsiveness which entails the development and deployment of the needed action toward using the information to satisfy customers needs. MO has been found to be related to competitive advantage and superior performance (Hilman & Kalippen, 2014; Long, 2013; Obeidat, 2016). This study will adopt the Kohli and Jaworski, (1990) dimensions of MO in line with prior studies.

2.5 EO and Performance

A review of empirical studies on the relationship between EO and performance reveals that there is a positive relationship between the two constructs. However the relationship is not straightforward and results have been found to be inconsistent across studies. Some studies reported significant positive relationships, (see Covin & Slevin, 1991; Lumpkin & Dess, 1996; Milovanovic, & Wittine, 2014; Radipere, 2014; Rauch et al, 2009) another study found no significant relationship (see Messersmith & Wales, 2011) while a few studies reported a curvilinear relationship between EO and performance (see Dai, Maksimov, Gilbert & Fernhaber, 2014; Su, Xie & Li, 2011; Tang et al 2008; Wales, Patel, Parida & Kreiser, 2013).

Early studies focused attention on the direct link between EO and performance, a bivariate analysis. However recent studies have explored the relationship at a multivariate level using contingency approach by introducing moderating and mediating variables. It has been observed however that the role of moderators has taken the center stage and has been extensively studied by scholars. In spite of its importance, mediation model have received less attention from scholars in exploring the EO- performance relationship (Wales, Gupta & Mousa, 2011). Mediators are relevant because they help us understand why a particular relationship is possible (Baron & Kenny, 1986). Wales et al, (2011) emphasized that the only way to ascertain contributory relationship between EO and its outcome in this case performance is through the use of mediation model.

2.6 Mediator Variables

In extant literature several authors have examined the EO-performance relationship using a variety of mediating variables. Variables used include market orientation (Aljanabi & Noor, 2015; Amin,Thurasamy, Aldakhil, & Kaswuri, 2016; Faiz, Ahmad & Al-swidi, 2015; Ruzgar, Kogak & Zurgar, 2014;Vega-Vazquez, Cossio-Silva & Ravilla-Camacho, 2016; Yu, Nguyen & Chen, 2015), innovation performance and differentiation strategy (Zehir, Can & Karaboga, 2015), knowledge creation, (Li, & Kao, 2008), competitive advantage, (Ibrahim & Mahmood, 2016; Mahmood & Hanafi, 2013), organizational culture, (Aliyu, Rogo & Mahmood, 2015), knowledge management, (Madhousi, Sadati, Delavar, Mehdivand & Mahindost, 2011), organizational learning and innovation (Sedyowidodo, Basbeth & Sule, 2017), marketing capability and reward philosophy, (Pratano & Mahmood, 2015), innovation (Kollmann & Stockmann, 2012; Rochdi, Khatijah & Muhammad,

2017). Others are, team work (Otache & Mahmood, 2015), functional performance (Rezaei & Ortt, 2018). In all the studies of mediation reviewed only four are conducted in Africa, three studies in Nigeria, (Aliyu, Rogo & Mahmood, 2015; Ibrahim & Mahmood, 2016) and one study in Libya (Faiz, Ahmad & Al-swidi, 2015) All the studies found varying degree of mediation.

Previous researches on the mediating role of MO on EO- performance relationship has been validated in developed economies and in different study areas for example Vega-Vasques et al (2016) studied hotel businesses in the United States while Yu et al (2015) examines the role of capability and alliance arising from the internet of things in the relationship between EO and MO and product and process innovation in China. The study by Amin et al (2016) was carried out in Malaysia on SMEs. Faiz et al, (2015) conducted their study in Libya on banks performance and Ruzgar et al (2014) conducted their study in Turkey. However, there appear to be scarcity of studies on the interaction between EO, MO and business performance in the African context.

Therefore the current study will contribute to the stream of research on the relationship between EO and firm performance by proposing a model which incorporates market orientation as a mediator in the relationship between EO and business performance in Nigeria. The alignment of the three constructs is in the next section.

2.6 EO, MO and Performance

Both EO and MO are strategic orientations. Strategic orientations can be seen as values that direct, influence and guide the activities of the organization, strategic orientation also create the behaviors necessary for achieving superior performance (Hakala, 2011). In addition strategic orientation is an intangible resource that can potentially result in performance (Harath & Mahmood, 2014).

The relationship between EO and MO rests on the idea that since EO involves entrepreneurial behaviors such as innovation, proactiveness and risk taking which is mainly focused on meeting market dynamism, MO on the other hand will facilitate this behavior by creating a culture within the organization through providing the required tools in form of market intelligence regarding customers and competitors and the dissemination of this intelligence to users within the organization.   In literature EO has been described as the antecedent of MO (Slater & Narver, 2000)

and this assertion has been   empirically substantiated (see Amin et al, 2016; Atuahene-gima & Ko, 2001; Matsuno, Mentzer & Ozsomer, 2002; Vega-Vasquez, et al, 2016; Yu et al, 2016). Therefore this study contributes to the research on the interplay between EO and MO by arguing that a well implemented MO has the potential of improving the EO- performance relationship. Therefore based on empirical evidence and those found in literature the study makes the following propositions

Proposition 1 There is a directpositive relationship between EO and business performance.

Proposition 2 The relationship between EO and performance is mediated by MO such that the relationship is stronger for firms that are market oriented
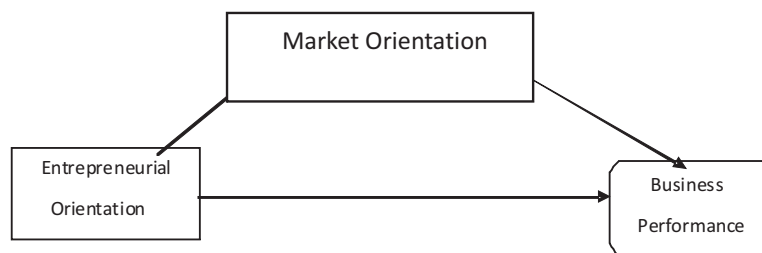
Figure 1: Proposed research model

3.0 METHODOLOGY

The review focuses on the concepts of entrepreneurial orientation, performance and market   orientation. Data was obtained through searches for peer reviewed journal articles in the internet using the search terms "entrepreneurial orientation and business performance, mediators, market orientation". The review covers empirical studies published in peer reviewed journals. Selection of articles for the review was not limited to any specific journal this is to provide the researcher with a comprehensive and robust sample size. Only empirical and contingency studies on the relationships between the three variables of interest were included while non empirical studies were excluded from the review. This method gave a suitable number of samples for the review.

4.0 DISCUSSION

The purpose of this study is to review literature on the relationship between EO and business performance and to propose a mediation effect model. The review revealed that the relationship between EO and performance is not straightforward. A review of empirical studies on the relationship has come up with conflicting results, Some studies reported significant positive relationships, (Covin & Slevin, 1991; Lumpkin & Dess, 1996; Milovanovic, & Wittine, 2014; Radipere, 2014; Rauch et al, 2009) one study found no significant relationship (Messersmith & Wales, 2011) while a few studies reported a curvilinear relationship between EO and performance (Dai, Maksimov, Gilbert & Fernhaber, 2014; Su, Xie & Li, 2011; Tang et al 2008; Wales, Patel, Parida & Kreiser, 2013).

The review also revealed that scholars are calling for adoption of contingency approach to the study of EO and performance relationship through the use of moderation and mediation effect models (Wales et al, 2011). It was discovered that the role of moderators have been widely studied, however the role of mediators is rarely examined in spite of the importance of mediating variables in explaining causal relationship between EO and performance. Furthermore the review revealed that the mediating role of MO on EO which has been validated in other parts of the world has been given less scholarly attention in Africa (see Amin et al, 2016; Atuahene-gima & Ko, 2001; Matsuno, Mentzer & Ozsomer, 2002; Vega-Vasquez, et al, 2016; Yu et al, 2016). Of all the studies of mediating role of MO on EO-performance relationship reviewed only one was conducted in Africa (see Faiz et al, 2015).

5.0 CONCLUSION AND RECOMMENDATIONS

This paper focused on review of empirical studies on the relationship between EO and business performance, in addition the paper presented definitions and discussion on key conceptual issues, and empirical findings. The review revealed a number of gaps in the literature. Among them is the scarcity of research on the mediating role of MO on EO-performance relationship in the African context. To address this gap this paper suggests that a mediation model should be adopted in order to understand the direct and indirect link between, entrepreneurial orientation, market orientation and business performance. It is hoped that the review and suggestions stimulate researchers to focus on this aspect of strategic management/ entrepreneurship research in general and in particular to explore the causal effect of other variables on

the EO- performance link in this part of the world. Moreover research on entrepreneurial orientation has not been fully explored hence provide ample opportunity to researchers willing to contribute to the area. The limitation of this study is that it is a review of literature. Researchers are therefore, encouraged to test the proposed model empirically.

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IMPACT OF PUBLIC DEBT ON ECONOMIC GROWTH IN NIGERIA

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Abstract

The amount of capital available in most developing countries treasury is grossly inadequate to meet their economic growth needs mainly due to their low productivity, low savings and high consumption pattern. Most countries resort to borrowing to promote economic growth and development, by creating conducive environment for people to invest in various sectors of their economies. However, despite the huge amount of debts which the country has continued to incur over the years, with the aim of achieving economic growth, high unemployment, poverty, and low standard of living is still prevalent in the country. This study thus examines the impact of public debt on economic growth in Nigeria between 1999 and 2016. Pre-estimation tests using ADF unit root test were carried out in the course of the study to avoid spurious regression results. Findings from the study revealed that external debt stock has had a significant and positive impact on the growth of Nigerian economy. However, it was found from the empirical analysis that external debt servicing had a significant but negative effect on the growth of Nigerian economy. It shows that an increase in external debt servicing by one percent, has on the average, shrinked Nigeria's economic growth by 0.06 percent between 1986 and 2016. It is recommended that the government should imbibe some measure of fiscal discipline which entails the habit of savings in order to withstand any shock whatsoever from the economy so that instead of resolving into borrowing from external sources, it can sustain economic activities with the accumulated savings. This will in turn avoid servicing of debt and recapitalization of arrears which adds pressure to the existing debt stock.

Key words: External debt, domestic debt, debt servicing, economy growth, Nigeria.

INTRODUCTION

Economic theory suggests that reasonable levels of borrowing by a developing country are likely to enhance its economic growth (Pattillo, Ricci, and Poirson 2012). When economic growth is enhanced (at least more than 5% growth rate) the economy's poverty situation is likely to be affected positively. In order to encourage growth, countries at early stages of development like Nigeria borrow to augment what they have because of dominance of small stocks of capital hence they are likely to have investment opportunities with rates of return higher than that of their counterparts in developed economies. This becomes effective as long as borrowed funds and some internally ploughed back funds are properly utilized for productive investment, and do not suffer from macroeconomic instability, policies that distort economic incentives, or sizable adverse shocks. Growth therefore is likely to increase and allow for timely debt repayments. When this cycle is maintained for a period of time, growth will affect per capita income positively which is a prerequisite for poverty reduction. These predictions are known to hold even in theories based on the more realistic assumption that countries may not be able to borrow freely because of the risk of debt denial.

The rationale for raising public loan by developing countries has always been to bridge the domestic resources gap in order to accelerate economic growth and development. To that effect, no one will quarrel with any developing country for resorting to external borrowing provided that the proceeds are utilized in a productive way that will facilitate the eventual servicing and liquidation of the debt. Thus, Nigeria resorted to external borrowing early in her history in order to quicken the pace of economic development (Sanusi, 1988).

Soludo(2003) asserts that countries borrow for two broad reasons; macroeconomic reason that is to finance higher level of consumption and investment or to finance transitory balance of payment deficit and avoid budget constraint so as to boost economic growth and reduce poverty. The constant need for governments to borrow in order to finance budget deficit has led to the creation of external debt (Osinubi and Olaleru, 2006).

While most developing countries resorted to external borrowing to finance development projects immediately after independence, Nigeria did not. Nigeria took its first major loan in 1978 (Eyo, 2011). This loan became necessary due to the fall in price and demand of crude oil in the world market. The decrease caused a reduction

in income accruable to the government for road construction, electricity, establishment of industry to create employment and reduce poverty. The intent was to invest the funds in productive ventures that would generate revenue with which to offset the loan and its interest payment. Regrettably however, this was not feasible as Nigeria continued to accumulate more debt at higher interest rates.

There is hardly any state that is totally free from debt. Public debt crisis has been one of the most teething problems of developing countries, Nigeria inclusive. Invariably, debt has become synonymous with underdevelopment, poverty, unemployment and all these have led to low standard of living.

The huge government debt stock of Nigeria in particular has prevented the country from embarking on larger volume of domestic investment, which would have enhanced growth and development (Clements, 2003). Government debt became a burden to most African countries because contracted loans were not optimally utilized, therefore returns on investments were not adequate to meet maturing obligations and did not leave a favourable balance to support domestic economic development. So, Nigerian economies have not performed well because the necessary macro-economic adjustment has remained elusive for most of the states in the country. The economy is a mono economy, it is not diversified and therefore will always have an unfavourable balance of payment and when that occurs, the tendency is to borrow to offset the disequilibrium. Compounding the problem is Nigeria's drift to mono economy with the discovery of oil.

Nigeria's debt burden is compounded by domestic debt which, as noted in the background above, has been rising astronomically in recent years. Consequently, the inability to diversify her revenue sources coupled with corruption and mismanagement compels Nigeria to have inadequate fund for growth and developmental projects. This therefore has informed the need to embark on the present study with a view to empirically analyze the impact of external debt on economic growth rate (as measured by GDP growth) of Nigeria.

In lines with the foregoing, the prime objective to empirically investigate the direct impact of public debt burden on economic growth in Nigeria by finding a long run and causal relationship between public debt and economic growth. To achieve this objective, the following hypothesis was formulated:

H_{01}: Domestic debts have no significant impact on economic growth in Nigeria.

H$_{02}$: External debt has not significantly influenced Nigeria's economic growth

H$_{03}$: Debt servicing has no significant impact on Nigeria's economic growth

This study could not have been undertaken at a better time than now, especially considering the importance of debt as a source of long-term economic growth. Since there is dissention among scholars and financial experts on the extent to which the government debt has affected the Nigerian economic growth, the findings of the study will put the issue to rest, by empirically revealing whether or not the government debt affected economic growth. Finally, it is hoped that this study will stimulate research interest in the area of public debt as it impact the Nigerian economic growth.

Empirical Review on Public Debt and Economic Growth

The motive behind public debt is to boost economic growth and development of any nation but as a result of future high debt service payments, it poses a serious threat to the economy of that nation. Economic researchers have therefore sought out to investigate the implication of public debt burden on the economies of debtor nations and have come up with diverse views.

Empirical studies on public debt-economic growth relationship are numerous in the literature in both developed and developing countries. (Savvides, 2012) while trying to measure the impact of debt overhang on the country's economic performance used a Two Stage Limited Dependent Variable model (2SLDV) procedure by cross section time series data from 43 Less Developing Countries (LDCs) encountering debt problem and concludes that debt overhang and decreasing foreign capital flows have significant negative effect on investment rates.

Fosu, (2016) tested the relationship between economic growth and external debt in sub Saharan African countries over the period 1970-1986 using O.L.S method. The study examined the direct and indirect effect of debt hypothesis. Using a debt-burden measure, the study reveals that direct effect of debt hypothesis shows that GDP is negatively influenced via a diminishing marginal productivity of capital. The study also finds that on the average, a high debt country faces about one percent reductions in GDP growth annually.

Karagol, (2012) investigated both the short-run and long-run relationships between economic growth and public debt service for Turkey during 1956-1996. The study employed a standard production function model analyzed using multivariate co-integration techniques. The Vector Auto regression estimates showed that there exists one Co-integration equation. It also revealed that debt service is negatively related to economic growth in the long-run. The causality test showed uni-directional causality between debt service and economic growth.

Clements, (2013) examined the channels through which external debt affects growth in low income countries. Their results suggest that the substantial reduction in the stock of external debt projected for highly indebted poor countries (HIPC) would directly increase per capita income growth by about 1% point per annum. Reductions in external debt service could also provide an indirect boost to growth through their effects on public investment.

An empirical investigation conducted by Audu, (2004) examines the impact of external debt on the economic growth and public investment of Nigeria. The study carried out its analysis using time series data covering the period from 1970-2002. The Johansen Co-integration test and Vector Error correction method econometric techniques of estimation were employed in the study. The study concluded that Nigeria's debt service burden has had a significant adverse effect on the growth process and also negatively affected public investment.

Ayadi and Ayadi, (2008) examined the impact of the huge external debt, with its servicing requirements on economic growth of the Nigerian and South African economies. The Neoclassical growth model which incorporates external debt, debt indicators, and some macroeconomic variables was employed and analyzed using both Ordinary Least Square (OLS) and Generalized Least Square (GLS) techniques of estimation. Their findings revealed that debt and its servicing requirement has a negative impact on the economic growth of Nigeria and South Africa.

Adesola, (2009) empirically investigated the effect of external debt service payment practices on the economic growth of Nigeria. Ordinary Least Square method of multiple regression was used to examine how debt payment to multilateral financial creditors, Paris club creditors, London club creditors, Promissory Notes holders and other creditors relates to gross domestic product (GDP) and gross fixed capital formation (GFCF) using data from 1981-2004. The study provides evidence that debt payment to Paris club creditors and Promissory Notes holders are positively

related to GDP and GFCF while debt payment to London club creditors and other creditors show a negative significant relation to GDP and GFCF.

Malik, (2010) explored the relationship between public debt and economic growth in Pakistan for the period of 1972-2005, using time series econometric technique. Their result shows that external debt is negatively and significantly related to economic growth. The evidence suggests that increase in external debt will lead to decline in economic growth. Empirical studies related to Nigeria on Debt-economic growth nexus also found significance among several scholars.

Ogunmuyiwa, (2011) examined whether external debt promotes economic growth in Nigeria using time-series data from 1970-2007. The regression equation was estimated using econometric techniques such as Augmented Dickey-Fuller test, Granger causality test, Johansen co-integration test and Vector Error Correction Method (VECM). The results revealed that causality does not exist between external debt and economic growth in Nigeria.

Safdari and Mehrizi, (2011) analyzed external debt and economic growth in Iran by observing the balance and long term relation of five variables (GDP, private investment, public investment, external debt and imports). Time series data covering the period 1974-2007 was used and the vector autoregressive model (VAR) technique of estimation was employed. Their findings revealed that external that has a negative effect on GDP and private investment and pubic investment has a positive relationship with private investment.

Sulaiman and Azeez, (2012) examined the effect of external debt on economic growth of Nigeria. Ordinary Least Squares (OLS), Augmented Dickey-Fuller (ADF) Unit Root test, Johansen Co-integration test and Error Correction Method (ECM) were employed in the empirical analysis. The findings from the error correction method show that external debt has contributed positively to the Nigerian economy. The study recommends that government should ensure economic and political stability and external debt should be acquired largely for economic reasons rather than social or political reasons.

Oladeji, (2012) examined the structural break relationship between external debt and economic growth in Nigeria. The study employed the se o quarterly time series data of external debt, external debt service and real GDP from 1980-2009. An empirical investigation was conducted using the chow test technique of estimation to

determine the structural break effect of external debt on economic growth in Nigeria as a result of the 2005 Paris Club debt relief. The result of their findings revealed that the 2005 external debt relief caused a structural break effect in the relationship between external debt and economic growth. Based on these findings they concluded that the external debt relief made available resources for growth-enhancing projects.

Onyeiwu, (2012) investigated the relationship between domestic debt and economic growth in Nigeria. The Ordinary Least Squares Method (OLS), Error Correction and parsimonious models are used to analyze quarterly data between 1994 and 2008. Our result shows that the domestic debt holding of government is far above a healthy threshold of 35 percent of bank deposit as the average over the period of study is 114.98 percent of bank deposit presenting evidence of crowding out of private investments. The study of course affirms that the level of debt has negative effect on economic growth. Government should maintain a debt- bank deposit ratio below 35 percent, resort to increase use of tax revenue to finance its projects and divest itself of all projects the private sector can handle while providing enabling environment for private sector investments such as tax holidays, subsidies, guarantees and most importantly improved infrastructure.

Faraji and Makame, (2013) investigated the impact of external debt on the economic growth of Tanzania using time series data on external debt and economic performance covering the period 1990-2010. It was observed through the Johansen co-integration test that no long-run relationship between external debt and GDP. However the findings show that external debt and debt service both have significant impact on GDP growth with the total external debt stock having a positive effect of about 0.36939 and debt service payment having a negative effect of about 28.517.

Ejigayehu, (2013) also analyzed the effect of public debt on the economic growth of eight selected heavily indebted African countries (Benin, Ethiopia, Mali, Madagascar, Mozambique, Senegal, Tanzania and Uganda) through the debt overhang and debt crowding out effect with ratio of external debt to gross national income as a proxy for debt overhang and debt service export ratio as a proxy for debt crowding out. Panel data covering the period 1991-2010 was used. The empirical investigation was carried out on a cross-sectional regression model with tests for stationarity using Augmented Dickey Fuller tests, heteroskedasticity and ordinary regression. The concluding result from estimation showed that external debt affects economic growth through debt crowding out rather than debt overhang.

Balago, (2014) in his study examines whether or not a relationship exists between external debt and economic growth in Nigeria. Time series data from 1981-2012 were fitted into the regression equation using various econometric techniques such as Augmented Dickey Fuller (ADF) test and Ordinary Least Square Regression. The result of the OLS model showed that external debt has a fairly significant positive relationship with the gross domestic product. This result is consistent with a number of earlier studies reviewed in the literature that found external debt and gross domestic product to have a positive relationship.

METHODOLOGY AND MODEL DEVELOPMENT

This study is fundamentally analytical and descriptive as it embraces the use of secondary data in examining Public Debt and Economic growth in Nigeria. The population of the study consists of the country debt between the periods 1986 to 2016 and adopted the entire population as its sample. The study utilized data relating to debt inflow from central bank bulletin, other relevant materials were sourced from journal articles/publication and other relevant online materials. The data sourced are related to the gross domestic product of the country, population of the country and the external debt the government has incurred.

The model used in this study will be based on the Augmented Production Function. Following (Adewuyi, 2005) as adopted by (Usman and Salami, 2008) in modeling the impact of public debt on economic growth in Nigeria, we therefore specify the country's aggregate debt function thus;

$$RGDP = f(DD, ED, DS) - - - - - - - - - - - - - - - - (1)$$

Thus, linearizing equation (1), we obtain:

$$PCI = \beta_0 + \beta_1 DD + \beta_2 ED + \beta_3 DS + \mu_t - - - - - - - - - - - - - (2)$$

In this, we used accumulated public debt inflow into Nigerian economy between 1986-2016 as a measure of the spillover impact of the current economy growth. The choice was necessitated by findings of Oladeji, (2012) examined the structural break relationship between external debt and economic growth in Nigeria. Onyeiwu, (2012) investigated the relationship between domestic debt and economic growth in Nigeria, Balago, (2014) In his study examines whether or not a relationship exists between external debt and economic growth in Nigeria.

EMPIRICAL RESULTS AND DISCUSSIONS

As earlier stressed under the methodology, the study employed ordinary least square (OLS) to test the overall impact of public debt on economy growth. The summary of the statistical results in the table below:

Table1:**Summary of Unit Root Test Results**

Variables	ADF Test Statistic(at first difference)	Order of Integration
RGDP	-3.425221(-3.221728)**	*I(1)*
ED	-5.327628(-4.309824)*	*I(1)*
DS	-3.873143(-3.574244)**	*I(1)*
DD	-3.562253(-3.221728)***	*I(1)*

*Notes: ***, ** and * significant at 10%, 5% and 1%, respectively*

Source: Authors Computation, E-views-10

From Table 1, it could be deduced that all the variables were stationary at first difference i.e. I(1) series. This is because their respective ADF statistic value is greater than the Mackinnon Critical Value @ 5 and 10% at absolute term after taking the first difference.

Table 2: **Summary of Co-integration Estimates**

Date: 04/21/18   Time: 22:29
Sample (adjusted): 1988 2016
Included observations: 29 after adjustments
Trend assumption: Linear deterministic trend
Series: RGDP ED DS DD
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.768980	72.16121	47.85613	0.0001
At most 1	0.480177	29.66890	29.79707	0.0517
At most 2	0.257434	10.69514	15.49471	0.2309
At most 3	0.068682	2.063467	3.841466	0.1509

Trace 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, E-views-10

Using the trace statistics, it indicates one co-integrating equations at 5% significance level which implies that long run relationship exists among the variables. This led to the rejection of the hypothesis of no co-integration among the variables.

Table 3: **Regression Model Result**

Dependent Variable: LOG(RGDP)
Method: Least Squares
Date: 04/21/18   Time: 22:37
Sample: 1986 2016
Included observations: 31

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.670928	0.370475	18.00640	0.0000
LOG(DD)	0.149152	0.038987	3.825690	0.0007
LOG(EDSV)	-0.069196	0.026443	-2.616746	0.0144
LOG(DD)	0.366437	0.034241	10.70162	0.0000

R-squared	0.880578	Mean dependent var		10.32272
Adjusted R-squared	0.867309	S.D. dependent var		0.506179
S.E. of regression	0.184384	Akaike info criterion		-0.423673
Sum squared resid	0.917936	Schwarz criterion		-0.238643
Log likelihood	10.56694	Hannan-Quinn criter.		-0.363358
F-statistic	66.36320	Durbin-Watson stat		1.916480
Prob(F-statistic)	0.000000			

Source: Authors Computation, E-views-10

The results obtained were generated using ordinary least square (OLS) regression analysis. The three hypotheses formulated in the study were tested using t-statistics. The level of significance for the study is 5%, for a two-tailed test. The decision rule is that we shall accept the null hypothesis if the critical t-statistic value of ±1.96 is greater than the calculated t-statistic, otherwise we reject the null hypothesis. That is, using the t-test (t-statistic), we say that a variable is statistically significant if the t* (t-calculated) is greater than the critical t- statistic of ±1.96 under 95% (or 5%) confidence levels and it is statistically insignificant if the t* is less than the tabulated value of ±1.96 under 95 %(or 5%) confidence levels.

F-statistic:

The F-statistics which is used to examine the overall significance of regression

model showed that the result is significant, as indicated by the value of the *F*-statistic, 66.36 and it is significant at the 5.0 per cent level. That is, the F-statistic P-value of 0.000 is less than 0.05.

The R^2 (R-square):

The R^2 (R-square) value of 0.8805 shows that external debts have a very good impact on economic growth in Nigeria. It indicates that about 88.05 per cent of the variation in economic growth is explained by external debts, while the remaining unaccounted variation of 11.95 percent is captured by the white noise error term.

Durbin Watson (DW) statistic

It was used to test for the presence of serial correlation or autocorrelation among the error terms. The acceptable Durbin – Watson range is between 1.5 and 2.5. The model also indicates that there is no autocorrelation among the variables as indicated by Durbin Watson (DW) statistic of 1.91. This shows that the estimates are unbiased and can be relied upon for economic decisions.

The CUSUM test does not require specifying a particular date and it plots the cumulative sum of the recursive residuals together with the 5% critical lines. The CUSUM test indicates parameter instability if the cumulative sum goes outside the area between the two critical lines.

Figure 1: CUSUM Test
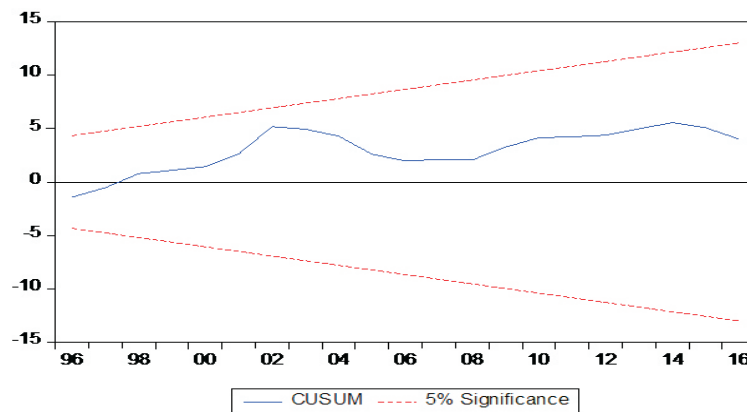
Source: Authors Computation, E-views-10

As observed from figure 2,the CUSUM test result indicates parameter stability as the cumulative sum does not go outside the area between the two critical lines.

Normal Distribution Test

It is a test for normality distribution assumption of the error term. The result shows the properties of the residuals. Importantly, the Jarque-Bera statistics is a test which shows whether the residual from our equation violates the normality assumption of the OLS technique.

Figure 2: Testing the normality assumption
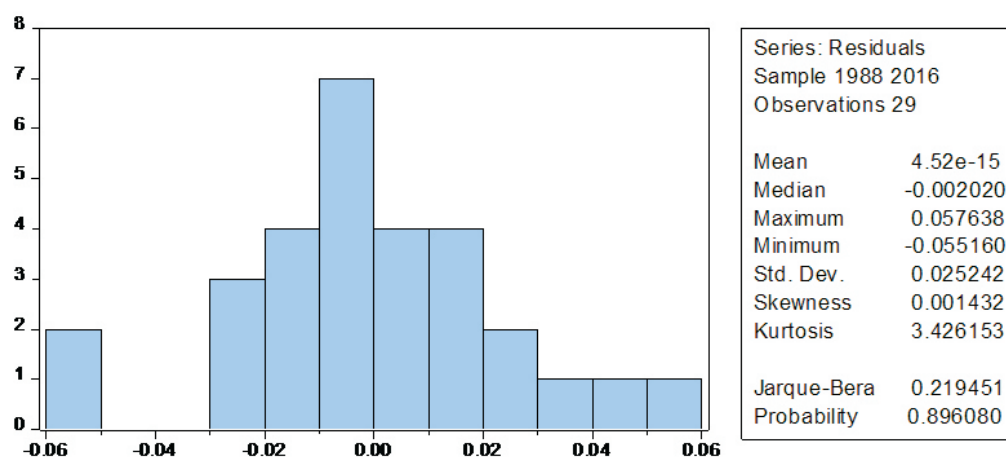
As shown in figure 2, the hypothesis of non-normality is rejected since the p-value of the Jarque-Berra statistics is greater than 0.05 (assuming 5% level of significance). Therefore, the residuals are normally distributed.

CONCLUSION AND RECOMMENDATIONS

The empirical results revealed that domestic debt has had a significant and positive impact on the growth of Nigerian economy. It shows that a percentage increase in external debt stock, has on the average, increased the growth of the Nigerian economy by 0.14 percent between 1986 and 2016. This result supports the findings of Nwannebuike et al. (2016) who found that External Debt is positively related to GDP.

However, it was found from the empirical analysis that external debt had a significant but negative effect on the growth of Nigerian economy. It shows that an increase in external debt servicing by one percent, has on the average, shrinked Nigeria's economic growth by 0.06 percent between 1986 and 2016. The implication from this study is that Nigeria as a country has not actually benefited from the dividends accrued to external debt servicing which supposedly is to bridge the saving-investment gap as opined by Chenery and Strout (1966) which in turn has the potential to induce economic growth. This is in agreement with Adesola (2009) who found that debt payments to London club creditors and other creditors revealed a negative effect on GFCF and GDP for the period of 1981-2004. More so, Akram (2010) findings revealed that both domestic and external debt servicing have negative relationship with per capita GDP and investment, confirming the existence of "Debt overhang effect" which crowds out private investment. In addition, Ibi and Aganyi (2015)result reveals a weak causation between external debt and economic growth in the Nigerian context. This implies that external debt could not be used to forecast improvement or slowdown in economic growth in Nigeria.

Lastly, the parameter estimate of debt servicing has a significant impact on Nigeria's economic growth showed that it relates positively with RGDP and it is statistically significant. The finding is contrary to the works of James (2006) whose results showed that public debt has no significant effect on the growth of the Nigeria economy because the fund borrowed were not channelled into productive ventures but diverted into private purse. He suggested further, that, for the gains of the debt forgiveness to be realized the War Against Corruption should be fought to the highest. Oshadami (2006) in her own study concluded that the growth of domestic debt has affected negatively the growth of the economy. This situation is premise on the fact that majority of the market participant are unwilling to hold longer maturity and as a result the government has been able to issue more of short term debt instruments. This has affected the proper conduct of monetary policy and affected other macroeconomic variables like inflation, which makes proper prediction in the economy difficult.

In line with the above, the study therefore recommend that government should maintain a proper balance between short term and long term debt instruments in such a way that long term instruments dominate the debt market. Even if the ratio of the long term debt is a multiple of deposit, the economy can still accommodate it so long as the proceed is channeled towards improving Nigerian investment climate. There is also for external debts to be contracted solely for economic reasons and not for social

or political reasons. This is to avoid accumulation of external debt stock overtime and prevent wastage of external debt,to boost economic activities and promote growth. Government should also adequately keep track of the debt payment obligations and the debt should not be allowed to pass a maximum limit so as to avoid debt overhang.

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