Employment Level and Economic Growth of Nigeria

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Abstract: This study is on the employment level and the economic growth of Nigeria. The objectives of this study were to describe the trend of employment level in Nigeria; determine factors influencing total employment level; determine the relationship between Total employment level and economic growth; Proffer recommendations based on research findings on the best way to improve employment generation potential in Nigeria.

Secondary data source from Central Bank of Nigeria (CBN) and National Bureau of Statistics (NBS) were used for this study. The study adopted regression analysis and causality tests for the study to achieve the stated objectives. However, the augmented dickey fuller (ADF) test was conducted to determine the stationarity of macroeconomic variables. (Gross domestic product (GDP), Inflation, Foreign direct investment (FDI), Interest rate). Result shows the RSquare 0.72 means that 72 percent of the variation in the dependent variable is explained by (Gross Domestic Product, Foreign Direct Investment, Interest rate and Inflation).The results further shows that foreign direct investment, inflation, interest rate have positive relationship with Employment level (Y).The result of granger causality also shows that GDP granger cause Inflation at 1% level of significant, FDI Granger cause GDP with a 5% level significant, Interest rate Granger cause GDP at 10% level of significant, FDI Granger cause Interest rate with a 10% level of significant. The result concluded that Gross domestic product (GDP), interest rate were factors that contributed to those Employment level in Nigeria. The research recommended that government should evolve appropriate economic policy so as to reduce the policies associated with interest rate and low output production (GDP).

Keywords: Employment, Economic growth, Gross domestic product, Regression analysis and Descriptive statistics.

1.0 Introduction

The goal of achieving full employment among other macroeconomic goals is an important one in many developing nations where unemployment and underemployment have been a major cause and consequence of widespread poverty. In spite of the importance of employment, the implementation of policies on employment creation in many developing nations has not yielded much impact as there is a wide gap between the jobs available and the number of job seekers actively seeking work in most poor nations.

Employment is one of the most important social and economic issues in every country. As a result, measures of utilisation and non utilisation of labour are usually of considerable concern to researchers and policy makers. The stock of unemployment usually attracts smaller attention than the flow; that is, how the rate of unemployment is moving. It is not easy to measure the rate of unemployment because of the conceptual problems of defining who is employed, unemployed or underemployed. Employment refers to the number of people who either work for pay in cash or kind, work on their own account or are unpaid family workers (NBS, 2012).

In Nigeria, Iyoha (1978) opined that employment generation is a significant drive of the growth rate of GDP in Nigeria. However, in the Nigerian economy, most employment is in the informal sector. A large proportion of these people are under self-employment with very low income (Jodie and Ogunrinola, 2011). Individuals and firms were motivated to go into informal economy activities for survival purposes following the economic downturn experienced by the country. Structurally, the country shifted from the agricultural sector to the petroleum industry following the oil boom in 1973. This resulted in unemployment, as persons moved from the agricultural sector in search of opportunities that were none existent in the official sector, thereby increasing the number of shadow

economy activities. Thus, most of the time, decent works are very hard to come by in the country.

Economic growth is defined in terms of increase in a nation's output of goods and services as measured by the Gross Domestic Product (CBN,1995)..Kuznets (1971) defined a country's economic growth as a "long-term rise in capacity of supply increasing diverse economic goods to its population, this growing capacity, based on advancing technology and the institutional and ideological adjustments that it demands". it therefore encompasses growth, structural and institutional changes and the essential elements that make up life such as education, health, nutrition, environment (i.e. human and development indices).

In spite of the very high-sounding electioneering promises of political leaders in many poor nations of the world, the achievement of impressive growth and decent employment remains a mirage. High rate of unemployment, unimpressive growth rates and poverty among other miseries of the populace, are the order of the day. In spite of its importance, the implementation of policies on employment creation in many developing nations has not yielded much impact as there is a wide gap between the jobs available and the number of job seekers actively seeking work in most poor nations.

Many studies on Nigeria's employment situation have been devoted to unemployment and its determinants and/or its impacts on economic growth (Adebayo and Ogunrinola, 2006; Oladeji, 1994; Omotor and Gbosi 2006). However, to our knowledge, not much research attention has been given to the estimation of employment elasticity with respect to economic growth in Nigeria. Nigerian economy has not supported employment generation especially decent employment. There has been a little growth in the agricultural sector. As there has been a shift of employment into agricultural sector. As of 2009, Nigerian labour force employment by sector was 70 percent in agriculture, 20 percent in

services and 10 percent in industry. The oil industry, though a major contributor to foreign exchange earnings, employs less than one percent of the labour force (Sodipe and Ogunrinola, 2011). Currently, the total work force in Nigeria is 52,510,219 people (CIA, 2010). This is the population between the ages of 20 and 59 years. The government employs about 2, 475,800 workers of the work force.

Most studies have been centered on unemployment and economic growth in Nigeria. thus leading to a death of literature on the impact of employment on economic growth of Nigeria. Though, from a cursory look at the Nigerian data on employment level and real GDP, it appears that the recent economic growth trends and patterns have been insufficient to make any appreciable impact on employment generation and poverty reduction, but this has not been sufficiently investigated empirically in the literature (Oni, 2006; Patterson et al 2006). In view of the above problem statement, the broad objective is to investigate the impact of employment level on economic growth of Nigeria while specific objectives are to: describe the trend of employment level and other macro economic variables in Nigeria, determine factors influencing Total employment level in Nigeria, determine the relationship between Total employment level and economic growth in Nigeria, proffer recommendations based on research findings on the best to improve employment generation potential in Nigeria.

However, the issue of real output and employment growth in developing nations is a sine-qua-non for poverty reduction and a more equitable income distribution (Fofana 2001). Employment is an economic drift through which human resources are put into productive use. The Keynesian economic analysis has posited that employment is envisaged as a pathway to enhance the growth rate of an economy. This is because when there is employment, there is productivity (Keynes, 1936). Hence, the achievement of full employment has often been seen as one of the germane macroeconomic objectives facing any civilization.

However, the outcome of the research of this nature would contribute it to the bundle of literature as well as serving as a policy direction to the government with a view to enhancing employment level in Nigeria.

2.0 Empirical review

Sodipe and Ogunrinola (2011) formulated a simple model of employment that was subjected to Least Square estimation haven corrected for non-stationary on the basis of the Hodrick-Prescott filter. The result of their econometric analysis shows that a positive and statistically significant relationship exists between employment level and GDP growth in Nigeria. In this regard, Sodipe and Ogunrinola (2011) obtained the empirical finding that supports the strand of theory suggesting that the positive relationship between GDP and employment is normal and that any observed jobless growth might just be a temporary deviation.

Onwioduokit (2006) examined the link between unemployment and several macroeconomic variables in Nigeria and concluded that 'the shift in the composition of unemployment in Nigeria since 2000 is very instructive as it has brought to the fore the inadequacies of the received theory towards explaining the unemployment phenomenon in the country'.

Borisade (2001) examined the structure of educational system and employment relationship in Nigeria. He conclude that a re-orientation of the educational system towards the employment needs of the economy would go a long way towards promoting productive employment in Nigeria.

Spieza (2004) formulated and estimated a model in which employment was a function of   exports, import and non-tradable to examine the effect of trade on employment. He found no significant relationship between FDI (the proxy variable for globalization) and employment.

According to Schmid, (2008), the type of economic growth (extensive or intensive), is an important factor that determines the rhythm of job creation in relation to economic growth. Thus, the economic growth (GDP growth - aggregate production) as reaction to the aggregate demand growth, can be achieved in different ways: either the quantity of inputs (labour force, capital, etc) increases and then we talk about extensive growth, or the productivity of production factors increases (intensive growth), or a combination of the two possibilities.

Fofana (2001) argued that the employment- growth relationship is significant and positive for Cote d'Ivoire having utilized time series data in the study. Fofana results were never in isolation as they were corroborated by those obtained by Swane and Vistrand (2006). Using the employment-population ratio as a proxy variable for employment generation index, Swane and Vistrand (2006) found a significant and positive relationship between GDP growth and employment growth in Sweden.

On his part, Yogo (2008) posits that the employment issue in sub-Saharan Africa is mostly a matter of quality rather than quantity. In particular, Yogo (2008) observed that the weak employment-growth nexus is not attributable to labour market rigidities; but rather to the weakness of productivity growth over time. The author thus investigated the relationship between economic growth, employment and unemployment in the European Union on one hand, and on the other analyzed the link between economic growth and the labour market. In sum, Walterskirchen (1999) found that a strong positive correlation between GDP growth and change in the level of employment.

Sawtelle (2007) estimated a significant positive elasticity of employment with respect to real GDP in each of fourteen industry sectors of the US with respect to changes in real GDP during the ten year period of 1991-2001.

Generally, recent studies (Kapos, 2005 and Dopke, 2001) showed that between economic growth and employment there is a positive and strong relationship, meaning that economic growth generates new jobs, but of different intensity from one period to another and from one country to another. This reflects the different response of the labour market to the economic growth process. The explanation for the existence of different employment intensity in relation to economic growth must be looked for in many directions.

3.0   Research methodology

3.1   Study area: Nigeria

3.2   Sources of data

The study covered period of 1985-2012. The major source of data for this study is the Statistical Bulletin published annually by the Central Bank of Nigeria (CBN, 2006). Other sources of data include the publications of the National Bureau of Statistics, CBN annual report and statements of account and Central Bank of Nigeria (CBN).

3.3   Method of data analysis

In order to describe the trend of employment level in Nigeria, determine factors influencing employment level in Nigeria; determine the relationship between employment and economic growth in Nigeria. This paper adopted the following procedures:

3.3.1   Descriptive statistics

This involves the use of tables, charts to describe the trend of employment level in Nigeria.

3.3.2   Regression analysis

This involves the use of ordinary least square method (OLS) to estimate factors influencing total employment generation in Nigeria.

3.3.3   Unit root test

The characteristics of the variables were investigated. The purpose is to determine the order of integration. The paper conducted the unit root test on the variables by employing the Augmented Dickey Fuller (ADF).

3.3.4   Granger causality test

This was used to determine the employment and other explanatory variables by employing the Granger causality test.

3.4 Model specification

$Y=f(X_1, X_2, X_3, X_4, U)$- Implicit function

The explicit function is as stated below:-

Linear function $Y=\beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+U$

Where:

Y=Total Employment (Nos).

X_1=Gross Domestic Product (₦'millions).

X_2=Inflation (%).

X_3=Foreign Direct Investment (₦'millions).

X_4=Interest Rate (%).

U=Error terms

3.5 Apiori Expectation

$\beta_1 > 0$i.e. GDP is expected to be >0.(i.e. positive) This is because total gross domestic product is expected to influence the total employment in the country.

$\beta_2< 0$(Inflation) because inflation might have adverse effect on Total Employment

$\beta_3> 0$(FDI) because when the rate of Foreign direct investment in the country is high, many people will be employed.

$\beta_4 \geq 0$(Interest Rate) i.e. if the interest rate is low, it can enhance employment because many firms and households will be able to seek for loan and investment will increase.

4.0   Results and Discussion

4.1   Descriptive Statistics

Descriptive statistics involves the use of graph to show the trends of all variables used in research. It is used to achieve the first objectives of this project which is to describe the trends in employment level over the years under the study (1985-2012).

4.1.1 Total employment (1985-2012)

Figure 3 shows the trend of employment over years. The y-axis show the employment rate and x-axis shows the years under the study and it shows that employment was constant between 1985 and 2005 and there was a sharp increase in 2006 and there was a steady increase between 2008 and 2012.
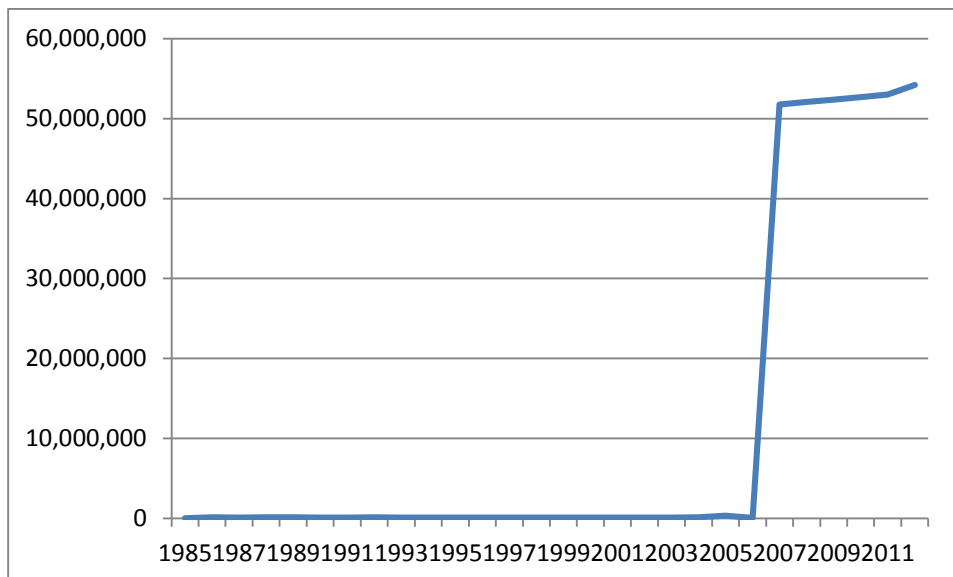

Figure 1:-Trend of Employment between 1985 and 2012.

Source: Data analysis, (2014)

4.4.2 Gross Domestic Product (GDP).

Figure 2:-This shows the trend of GDP over years. It shows that GDP has been relatively stable between 1985 and1987 and between 1990 and 2000 there was a gradual increase in the output but it roses sharply in 2005 to 2010.
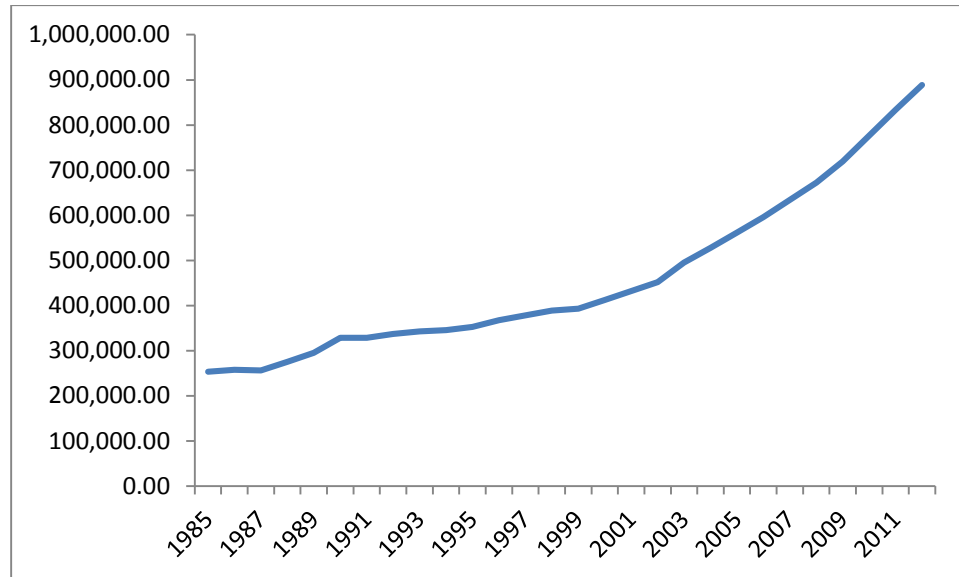

Figure 2: Trend of Gross Domestic Product between 1985 and 2012

Source: Data analysis, (2014)

4.2 Regression analysis

The linear regression analysis shows the relationship between dependent and independent variables. It was used to determine the factors influencing total employment in Nigeria.

Table 4.2: Regression Results of factors influencing total employment in Nigeria.

Dependent Variable: Total Employment

Method: Least Squares

Date: 04/25/14 Time: 12:13

Sample: 1985-2012

Variable	Coefficient	Std.Error	t-Statistic	Prob.
C	-21.70227	5.267474	-4.120053	0.0004
LOGGDP	5.123124	0.951623	5.383564	0.0000
INFLATION	0.007856	0.007103	1.106065	0.2801
LOGFDI	-0.180623	0.531022	-0.340142	0.7368
IRATE	-0.094343	0.036418	-2.590577	0.0164
R-squared	0.724382	Mean dependent variable		5.515355
Adjusted R-squared	0.676449	S.D. dependent var		1.165323
S.E. of regression	0.662854	Akaike info criterion		2.175908
Sum squared resid	10.10563	Schwarz criterion		2.413802
Log likelihood	-25.46271	F-statistic		15.11222
Durbin-Watson stat	1.252641	Prob (F-statistic)		0.000003

Source: Data analysis (2014).

4.2.1 Significance of the variables

The table above shows the result of the ordinary square (OLS) regression analysis with 28 observations. The regression result shows that GDP, inflation were positive while FDI and Interest rate were negative. This implies that a unit increase in GDP will lead to a5.12 percent increase in Employment level while a percentage increase in Inflation would lead to 0.007656 increase in employment level. Similarly, a percentage increase in FDI will lead to a 1.81percent decrease in Employment level and a unit increase in Interest rate will lead to a 0.094343 unit decrease in Employment level.

4.2.2 Coefficient of determination

The R^2 of 72% means that 72 percent of the variation in the dependent variable is explained by independent variables (Gross Domestic Product, Foreign Direct Investment, Interest rate and Inflation). The model is also of high goodness of fit.

4.2.3. DURBIN WATSON (DW)

The DW measures the presence of autocorrelation in the model. However, it is noted that there exist a negative autocorrelation since the DW statistic observed in the model is1.25264.

4.2.4 F-Statistics

The F- value calculated is 15.05026 with a probability of 0.000003.This shows that the model is statistically significant at 1% level. This means that the explanatory variables simultaneously explain variation in the dependent variable. This implies that the model has good fit.

4.3 Granger causality

The Granger causality test statistics was used to estimate the causal relationship between total Employment and macro economic variables (GDP, FDI, IRate and Inflation).

4.4.1 **Result of Granger Causality Test**

The result of Granger causality shows that GDP granger cause Inflation at a probability of (0.01764) at 5% level, FDI granger cause GDP at a probability of (0.05188) at 10% level, Irate granger cause GDP at a probability of (0.08163) at 10% level and FDI granger cause Irate with a probability of (0.06463) at 10% level This implies that these variables that tend to show uni-directional in causality are significant in the economic growth of

Nigeria and Employment in particular.

Null Hypothesis	Fstatistic	Probability	Decision	Causality
LOGGDP does not Granger cause LOGEMP	2.02055	0.15756	Reject	No feed back
LOGEMP does not Granger cause LOGGDP	0.34223	0.71407	Reject	
Inflation does not Granger LOGEMP	1.30855	0.29136	Reject	No feed back
LOGEMP does not Granger cause Inflation	0.98281	0.39082	Reject	
LOGFDI does not Granger cause LOGEMP	0.73172	0.49294	Reject	No feed back
LOGEMP does not Granger cause LOGFDI	0.40482	0.67319	Reject	
Irate does not Granger cause LOGEMP	0.87906	0.42950	Reject	No feed back
LOGEMP does not Granger cause Irate	1.96025	0.16575	Reject	
Inflation does not Granger cause LOGGDP	4.92387	0.01764	Accept	Uni-directional
LOGGDP does not Granger cause Inflation	0.08288	0.92076	Reject	
LOGFDI does not Granger cause LOGGDP	0.83958	0.45003	Reject	Uni-directional
LOGGDP does not Granger cause LOGFDI	3.41773	0.05188	Accept	
Irate does not Granger cause LOGGDP	0.90735	0.41884	Reject	Uni directional
LOGGDP does not Granger cause Irate	2.82972	0.08163	Accept	
LOGFDI does not Granger cause Inflation	0.13876	0.87157	Reject	No feed back
Inflation does not Granger cause LOGFDI	0.71203	0.41704	Reject	
Irate does not Granger cause Inflation	1.21388	0.31705	Reject	No feed back
Inflation does not Granger cause Irate	0.59581	0.9831	Reject	
Irate does not Granger cause LOGFDI	3.12951	0.06463	Accept	Uni directional
LOGFDI does not Granger cause Irate	2.06923	0.15127	Reject	

Source: Data analysis, (2014).

4.4 Results of unit root test.

The results of unit root test is presented below. The variables under consideration are Employment, Gross Domestic Product, Inflation, Foreign Direct Investment and Interest Rate. Augmented Dickey Fuller (ADF) was used here instead of Dickey Fuller (DF) because the ADF is more sophisticated in testing for stationary of variables. A Augmented Dickey Fuller (ADF) was used to determine the characteristics of variables/series used in the regression model. The results of the unit root test showed that employment, inflation and interest rate were stationary at 1st difference while GDP and FDI which were stationary at 2nd difference.

Table 4: Result of unit root test of macroeconomic variables

Variables	ADF test statistics	1%	5%	10%	Test for unit root
Total employment	-3.957788	-3.7204	-2.9850	-2.6318	1st difference
GDP	-4.983919	-4.4415	-3.6330	-3.2535	2nd difference
Inflation	-4.865183	-4.3738	-3.6027	-3.2367	1st Difference
FDI	-5.285687	-4.3942	-3.6118	-3.2418	2nd Difference
Interest Rate	-5.535971	-4.3738	-3.6027	3.2367	1st difference

Source:-Data analysis (2014)

5.0   Conclusion and recommendations

5.1   Summary of findings

The study examined the "Impact of employment on the economic growth on Nigeria "

Study has been able to find out that there had been fluctuations in the trend of employment, Gross domestic product (GDP), Inflation; foreign direct investment (FDI), Interest rate in Nigeria during the period of the study (1985-2012).

- The results of the regression showed that 76% of variations in dependent variables were explained by the explanatory variables. The result further shows that GDP and Inflation have positive relationship with Employment(Y).This implies that a unit increase in these variables will lead to a unit increase in Employment level.

- The results of unit root suggest that the variables in the model were stationary at 1%, 5% and 10% at first and 2nd difference.

- The results of granger causality also shows that GDP granger cause Inflation at 1% level of significant, FDI Granger cause GDP with a 5% level significant, IRate Granger cause GDP at 10% level of significant, FDI Granger cause IRate with a 10% level of significant.

5.2 Conclusion

This study investigates the impact of employment level on the economic growth of Nigeria. The study concluded that there exists significant relationship between the employment level, GDP and Interest rate during the period of study (1985 and 2012). This therefore implies that GDP, FDI, Inflation and Interest rate are the significant variables that contributed to the employment level in Nigeria. Similarly, the study concluded that there is uni-directional relationship between employment and Economic growth (proxy by real GDP).

5.3 Recommendations

Based on the findings of the study the following are therefore recommended:-

Policy makers are strongly advised to control the level of output in Nigeria by providing enabling environment for the production sector with a view to enhancing employment and the economy at large.

Government should maintain stable macroeconomic policies by strengthening government institutions with a view to enhancing employment potentials in the economy.

Government should evolve appropriate economic policy so as to reduce the problems associated with interest rate and low output production (GDP).

The Federal Government is also advised to ensure minimal interest rate through Central Bank of Nigeria (CBN) with a view to enhancing investment, as this will eventually lead to employment opportunities in Nigeria.

More so, Workshops vocational skill centre, entrepreneurial directors should be established to foster knowledge exchange and learning opportunities to achieve greater employment potentials among the Nigerian youths.

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