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An Analytical Study of the Impact of Unemployment on Economic Growth in Nigeria (1970-2016)

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ABSTRACT: Unemployment leads to low income, low savings, low investment and low national income. Unemployment leads to loss of output and unemployed youth constitute threat to security as they often involve in social vices. The objective of this study is to analyse the impact of unemployment on economic growth in Nigeria from 1970 to 2016. The unit root properties of the series were tested. The result of the unit root shows that the variables are co-integrated of order one. This study therefore used Johansen co-integration and error correction mechanism (ECM) to test short run and long run impacts of unemployment on economic growth. Granger causality test was also carried out to test the causality between unemployment and economic growth. The result shows that there is a long run relationship between unemployment and economic growth in Nigeria. Unemployment rate has a positive impact on the economic growth both in the short run and long run. The Granger causality shows that there is a unidirectional causality running from unemployment to economic growth. The model is free from autocorrelation and heteroscedasticity. The study there, recommends vocational education in our tertiary institutions and diversification of the economy.

Key Words: Cointegration, Error Correction Mechanism, Unemployment, Economic Growth, Autocorrelation, Het

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I. INTRODUCTION

Achieving price stability, full empowerment and economic growth are parts of macroeconomic objectives. According to Aminu, Manu and Salihu (2013), unemployment is often defined by classical economists as the excess supply of labour over the demand for labour caused by adjustment in real wage. Classical or real wage unemployment occurs when real wages for jobs are set above the market clearing level, causing a number of job-seekers to be more than the available vacancies. Unemployment was defined by the international labour organization (1982) as comprising all the persons above a specified age who during the reference period were: Without work, that is, were not in paid employment or self-employment during the reference period. They are Currently available for work, that is were available for paid employment during the reference period; and are Seeking work, that is, have taken specific steps in a specified recent period paid employment or self-employment. The specified steps may include registration at a public or private employment exchange: application to employers; checking at worksites, factory gates, markets or other assembly places, placing or answering newspaper advertisements; seeking the assistance of friends or relatives; looking for land, building, machinery or equipment to establish own enterprises, arranging for financial resources; applying for permit and license e.t.c.

According to Chinedu (2015), every year over 90 universities in Nigeria produce thousands of graduates. This is a welcome development but they linger in the labour market without jobs. Employers chalk it to them not being qualified for the available jobs. Out of frustration, most of them end up engaging in various social vices, such as robbery, kidnapping, drug trafficking, e.t.c. just to earn a living.Kemi andDayo (2014 citied the Oni 2006) argued that the unemployment problem in Nigeria has different dimensions. There are under-employment cases in which people receive income that is inadequate to support their basic needs in terms of food, clothing and shelter. There are also cases of disequilibrium unemployment where people take up jobs that are below their educational attainment and experience. The worst case of all is that of people seeking for job opportunity but who cannot find any either in the public or the private sector. Some people are willing and ready to set up enterprises themselves and engage in one type of economic activity or the other but are constrained by the prevailing poor macroeconomic environment. NBS (2016) reported that in the second quarter of 2016, the nation's Gross Domestic Product (GDP) declined by -2.06 (year on year) in real terms. This was lower by 1.70% points from growth rate of -0.36% recorded in the first Quarter of 2016. According to Abdulsalam and Abdullahi (2016), the Nigerian economy has remained largely underdeveloped despite the increase in the

growth rate declared every year. In the 2014 budget, it was projected to grow at 4.5% and in 2015 5.5% percent, a figure which is far higher than developed countries like USA that observed a growth rate of 2.2% in 2014. The growth in Nigeria has been described as exclusive growth. Per capita income is low and unemployment and the inflation rate are high. According to Bakare (2012), a cursory glance at the data on Nigerian unemployment and output growth would suggest the existence of the new popular concept of "jobless growth".

II. THEORETICAL AND EMPIRICAL LITERATURE

Okun's Law

Okun (1962), explained the relationship between unemployment and GDP. The Okun's law explains the due to change in aggregate demand, firms change their output plans and this leads to changes in demand for labour and therefore affects the rate of unemployment. Two methods have been used to estimate the Okun's coefficient, the first method is the output- gap method, which is shown below:

$U_t-U_t^*=b(Y_t-Y_t^*)$ ……1

Y_t= the real output product, Y_t^*=potential output, U_t=the natural level of unemployment, U_t^*=the potential unemployment, b=Okun's coefficient.

The second method is the use of Okun's first difference'

$\Delta U=\alpha-b\ (\Delta Y/Y)$……..2

Another alternative is to test the relative sensitivity of output to unemployment changes'

$(\Delta Y/Y)_t=\alpha-b\Delta U_t+\varepsilon_t$……3

Or $\log Y_t=\alpha-b\log U_t+\varepsilon_t$……4

Estimation of b will give the Okun's coefficient. This coefficient shows a negative relationship between output growth and unemployment rate. (Noor, Nor and Ghani, 2007)

Literature Review

Noor, Nor and Ghani (2007), examined the relationship between output and unemployment in Malaysia. The study used annual time series data from 1970 to 2004. The variables used in the study included GDP as a dependent variable while unemployment rate served as an independent variable. The unit root properties of the series was tested. The two variables were non stationary at level but became stationary at first difference. The Ordinary Least Square (OLS) was used to capture the impact of unemployment on economic growth. The Granger causality test was also carried out. The result shows that unemployment has a negative impact on the economic growth in Malaysia. The Granger causality shows that there is a bi-directional causation between GDP and unemployment. The major limitation of this study is that it applied OLS after differencing the variables, this means that the long run information are missed out. Besides, it failed to carry out necessary post estimation test to determine the robustness of the model.

Mosikari (2013), examined the effect of unemployment rate on gross domestic product in South Africa. The study employed annual time series data from1980 to 2011. The variables used for the study included: Gross Domestic Product (GDPCP) as a dependent variable, while the independent variables are general government expenditure (GVEXP), total investment (INV), inflation (inf) and unemployment rate (unemp). The unit root properties of the model was tested using augmented Dickey Fuller (ADF) test. The unit root test shows that the variable were co-integrated of order of order one. Johansen co-integration test was carried out to test the presence of co-integration among the variables. The Granger causality test was also carried out. The result shows that the variables are co-integrated. The Granger causality shows that there are no causation between unemployment and economic growth. The major limitation of this study is that it failed to establish the exact impact of unemployment on economic growth. Besides, it failed to carry out necessary post estimation tests, such as autocorrelation, heteroscedasticity and stability diagnostic check to determine the robustness of the model.

Ogueze and Odim (2015), examined the cost of unemployment and GDP growth in Nigeria. The study used annual time series data from 1970 to 2010. The variables used for the study included: real GDP (RGDP), unemployment rate (UNP), interest rate (INT), investment (INV), import (IMP) and money supply (M2). The study employed ordinary Least Square (OLS). The result shows that unemployment rate has a negative impact on economic growth in Nigeria. The major limitation of this study is that it failed to test the unit root properties of the series. This may lead to spurious regression.

Onwachukwu (2015), examined the impact of unemployment on the economic growth in Nigeria. The study used time series data from 1985 to 2010. The variables used in the study include real GDP Growth (RGGR) which serves as a dependent variable, while the independent variables are inflation rate and unemployment rate. The study employed ordinary least squares (OLS) and Augmented Dickey Fuller methods. The result shows that unemployment has significant negative effect on economic growth in Nigeria. It was also observed that the inflation has an insignificant negative effect on the economic growth in Nigeria. The negative

relationship between unemployment and economic growth and also between inflation and economic growth is in line with the finding of Bakare (2012) and Ogueze and Odim (2015).This study is silence about the causality between economic growth, unemployment and inflation. The time frame of this study is not enough to give better analysis

Ditimi and Ifeakachukwu (2013) examined the impact of unemployment on productivity growth in Nigeria. The study used time series data from 1986 to 2010. The objective to examine the relationship between unemployment rate and productivity growth. The variables used in the study included; productivity growth (y), which served a dependent variable. While the independent variables are government expenditure, capital, labour and the inflation rate (INF) and unemployment rate. The study employed co-integration and error correction mechanism. The finding shows that unemployment has a positive effect on economic growth and inflation has a positive and an insignificant effect on economic growth. The positive relationship between unemployment and economic growth is in with the finding of Aliyu (2012) but in contrast with the finding of Ogueze and Odim (2015). The limitation of the study is that it used Johansen co-integration for the variables which are I(O) I(1) and I(2). The right model for this study is Auto Regressive Distributive Lags (ARDL). The variable with I(2) is over differenced, this lead to lose out of vital information. Besides, the time frame used for this study is not enough to give a better analysis.

Bakare (2012), examined stabilization policy, unemployment crises and economic growth in Nigeria. The study used time series data between1980 to 2008. The objective of the study was to check whether the estimated coefficient support the idea that urban unemployment crises had a large negative significant impact on the economic growth in Nigeria. The variables used in the study include Real Growth rate of National income (RGDP) as a dependent variable while the independent variables are Unemployment Rate(UMP), inflation rate(INFL), Private Domestic Investment(INV) and money supply(MSR). The study used Philips-Perron (PP) test for stationarity, Johansen test for co-integration and error correction mechanism. The result shows that unemployment and inflation are negatively related to economic growth. The finding of this study is in line with the finding of Ogueze and Odim (2015) and Onwachukwu (2015). The major limitation of this study is that the time frame for this study is not enough to give better analysis.

Aliyu (2012), examined macroeconomic policy, output and unemployment dynamics in Nigeria. The study used time series data from 1970 to 2010. The variables used in the study include transition or permanent component of the natural logarithm of unemployment (Ut) and transition or permanent component of the real GDP (GDPt). The study employed a linear Okuns'-type model using the transitory and permanent component of real output, it also used nonlinear variant of Okun's-type model by applying Generalized Method of Moment (GMM). The result of Okun's-type model using the transitory and permanent components of real output shows that short run relationship between output and unemployment is negative but the long run relationship between output and unemployment is positive. The result of GMM shows that dynamic relationship between output and unemployment is nonlinear, at unemployment below the threshold level of 5.5% the relationship is positive and becomes negative at higher level of unemployment.

III. DATA AND METHODS

Research Design

This paper used causal research design to capture the effect of inflation and unemployment on economic growth in Nigeria. Causal research design is a type of research design in which there is a dependent variable and independent variables, whereby dependent variable response to the changes in independent variables.

Sources of Data

Annual data from 1970 to 2016 was employed in the paper. The data used are mainly secondary data and were sourced from CBN bulletins, NBS, Atan (2013), Abdullahi and Abdulsalam (2016)

Model Specification

Okun's law is used as a theoretical basis to explain the relationship between unemployment and economic growth. It explained that there is a negative relationship between unemployment and economic growth.

This study adopts Aliyu (2012) type model, which is shown below:

$$Y=\beta0+\beta1U_t+\beta2U^2_t+\varepsilon_t \quad \ldots\ldots (1)$$

Where Y is the detrend output, U is the unemployment rate.

The above model is modified as follows:

$$GDP=\beta1+\beta2unemp+\varepsilon t \quad \ldots\ldots (2)$$

Where GDP= real Gross Domestic Product, Unemp= unemployment rate and Et= error term.For statistical reason the above model is logged, as shown below:

$$LGDP=\beta1+\beta2Lunemp+\varepsilon t \quad \ldots\ldots (3)$$

Measurement of Variables

Real Gross domestic product (GDP): This refers to national GDP that has been adjusted for inflation or deflation that is GDP divided by price deflator (price of the base year). Real GDP is used as a proxy for economic growth. Unemployment (Unemp): This is the percentage of unemployment to working population. This study used old formula where people working less than forty hours are in a week are considered unemployed.

Estimation Techniques

i)Unit Root Test

When data exhibit unit root, it means they are non-stationary. When non stationary series data is regressed on another non stationary data, it will lead to spurious or non-sense regression. In order to avoid non sense regression, this study adopts Augmented Dickey Fuller Test (ADF) with structural break. Testing unit root without considering the presence of structural break when there is one or more breaks in the series under consideration, either in the intercept or slope of the regression would bring out wrong result in terms of performance of f and t statistics. This makes it difficult to reject the null hypothesis, that is absence of unit root or to say that the model is stationary.

The unit root model is written as:

$LGDP= \alpha_0 + \alpha DU_t + d\ (DTB) + \Upsilon DT + B_t + \rho LGDP_{t-1} + \sum_{i-1}^{p} \boldsymbol{\phi} \Delta GDP_{t-1} + \varepsilon_t$…… (4)

$LUnemp= \alpha_0 + \alpha DU_t + d\ (DTB) + \Upsilon DT + B_t + \rho Lunemp_{t-1} + \sum_{i-1}^{p} \boldsymbol{\phi} \Delta Lunemp_{t-1} + \varepsilon_t$…(5)

Where: DUt= intercept Dummy, DUt= 1 if (t >TB) and zero otherwise

DT= slope Dummy, which represents a change in the slope of the trend function,

DT=t-TB, if t> TB, and zero otherwise.

DBT= crash Dummy=1 if t= TB+1, and zero otherwise.

TB is the break date. (Glynn, Perera and Verma, 2007).

(ii) Lag Selection Criteria

The paper used the following lag selection criteria

AIC = ln (Õ2) + 2k/T

SBIC =In (Õ2) + k/T ln T

HQIC = ln (Õ2) + 2k/T ln (In (T))

Where Õ2 is the residual variance, K is the total number of parameters estimated and T is the sample size (Brooks, 2014).

(iii) Johansen Test of Cointegration

Johansen's methodology takes starting point is in the vector auto regression (VAR) of order p is given by $y_t = \mu + \Phi y_{t-1} + \Phi p y_{t-p} + \varepsilon_t$ ..... (6)

Where yt is an nx1 vector of variables that are co integrated of order one. That is I (1).

Johansen proposed two different likelihood ratio tests of the significance of these correlations thereby reducing rank of Γ matrix.The trace test and maximum Eigen value test are shown below:

n

Trace= $-T\sum_{i=r+1} ln(1 - \dot{\eta}_{1)}$

Max= $-T \ln (1- \dot{\eta}_{r+1})$

T is the sample size and ήis the largest correlation.

The trace statistics uses the null hypothesis of r co-integration against alternative hypothesis r+1 (Erik and Par, 2007).

(iv) Error Correction Mechanism

In order to estimate short run relationship between the two variables in equation (2), the error correction equation is estimated as:

$\Delta LGDP= \alpha + \sum_{i=1}^{1} \beta 1 \Delta LGDP_{t-i} + \sum_{i=1}^{1} \beta 2 \Delta Lunemp_{t-i} + \psi ECM_{t-i} + \varepsilon_t$ ..... (6)

Post Estimation Tests

(i) Serial Correlation test

Breuch – Godfrey Lm – Test

Lm = (n-p) R^2 x^2p (Gujarati 2012)

H_0: $P_1 = P_2$..... $P_p = 0$ (No Serial correlation)

H_1: $P_1 = P_2$..... $P_p \neq 0$ (Presence of Serial correlation)

(ii) Heteroscedasticity test
Breush Pagan (1979) Lm test
Lm State = nr2
X^2 (P – 1)
H0: $2_1 = 2_2$..... 2n = 0 (Homoscedasticity)
H1: $2_1 = 2_2$..... 2n ≠0 (Homoscedasticity)

Granger Causality Test
Although regression analysis deals with the dependence of one variable on the other variables, it does not necessarily, imply causation Gujarati (2012). The Granger causality test is used to determine the causality between variables under study. The Granger of any of the independent variable cause economic growth or economic growth cause the independent variable is shown below:

$$\Delta LGDPt = \alpha_1 + \sum_{i=1}^{1} \beta 1 \Delta LGDP_{t-i} + \sum_{i=1}^{1} \beta 2 \Delta Lunemp_{t-i} + \psi ECM_{t-i} + \varepsilon_t \quad (7)$$

$$\Delta Lunempt = \alpha_2 + \sum_{i=1}^{1} \beta 2 \Delta Lunemp_{t-i} + \sum_{i=1}^{1} \beta 1 \Delta LGDP_{t-I+} \psi ECM_{t-i} + \varepsilon_t \quad (8)$$

From equation (8) and (9) we have two Null hypotheses, which are shown below:

(i) HO: unemployment rate does not granger cause GDP
(ii) HO: GDP does not Granger cause unemployment rate

IV. RESULTS AND DISCUSSION

Table 1 Unit root test

Level				First difference		
Variables	Intercept and trend			Intercept and trend		
	Test sta.	1%	5%	Test sta.	1%	5%
LGDP	-4.38	-5.72	-5.18	-8.48	-5.72	-5.18
Lunemprate	-4.85	-5.72	-5.18	-8.20	-5.72	-5.18

Source: Authors' computation from E-views software.

From the table I, both LGDP and Lunemp are not stationary at level because their test statistics are more than critical values at 1% and 5%. At the first difference all the variables became stationary.

Table 2: VAR lag order selection criteriaEndogenous variables: DLGDP DLunemprate

Lag	logL	LR	FPE	AIC	SC	HQ
1	-9.129021	NA	0.006407*	0.625191*	0.790684*	0.685851*
2	-5.712974	6.181419	0.006594	0.652999	0.983983	0.774318
3	-4.764875	1.625313	0.007647	0.798327	1.294804	0.980306
4	-1.584266	10.27956*	0.006875	0.686464	1.348433	0.929101

Source: Author's computation from E-views software.
*Indicates lag order selected by the criterion.
LR: sequential modified LR test statistic (each test at 5% level)
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hanna-Quinn information criterion

From table 2 above, the optimum lag is lag 1, which is based on FPE, AIC, SC and HQ. Therefore, this study used lag 1 to test long run relationship between GDP and unemployment rate in Nigeria.

Table3: trace statistics

Hypothesized No of CE(S)	Eigen value	Trace Statistic	0.05 critical values	Prob.*
None*	0.433408	38.47373	15.49471	0.0000
At most1*	0.263825	13.47667	3.841466	0.0002

Source: Author's computation from E-views software.
Trace test indicates 2 co-integration eqn. (s) at the 0.05 level
*denotes rejection of the hypothesis at the 0.05 level
**Mackinnon-Haug-Michalis (1999) p values.

From table 3, all the null hypotheses which state that there are no co integration were rejected because all the p values are less than 5%. Also the trace statistics are more than critical values at 5% level of significant, indicating that unemployment rate and economic growth are co-integrated.

Table 4: Max-Eigen value test

Hypothesized No of CE(S)	Eigen value	Max-Eigen statistic	0.05 critical values	Prob.**
None*	0.433408	24.99708	14.264600.0007	
At most1*	0.263825	13.47667	3.841466	0.0002

Source: Author's computation from E-views software.
Max-Eigen value test indicates 2 co-integration eqn(s) at the 0.05 level
*denotes rejection of the hypothesis at the 0.05 level
**Mackinnon-Haug-Michelis (1999) p values.

From table 4, all the null hypothesis, which state that there are no co integration were rejected because all the p values are less than 5%. Also the Max-Eigen value statistics are more than critical values at 5% level of significant, indicating that unemployment rate and economic growth are co-integrated.The result of the normalized equation with respect to DLGDP is (0.7369). This means 1% increase in unemployment rate leads to 73.69% increase in GDP. This is contrary to Okun's law, which postulated a negative relationship between unemployment and economic growth. It is also contrary to other findings, such as Bakare (2012), Onwachukwu (2015), Ogueze and Odim (2015) and Noor, Nor and Ghani (2007). The finding of positive impact of unemployment is in line with that of Amassoma and Nwosa (2013) and Ditimi and Ifeakachukwu (2013).

Table 5: The parsimonious error correction model of DLGDP

Variable	coefficient	Std. Error	t-statistic	prob.
C	0.00590	0.031178	0.018936	0.9850
D(DLGDP)(-1)	-0.260323	0.147571	-1.764060	0.0854
D(Dunemprate)(-1)	0.216619	0.068997	3.139545	0.0032
ECM(-1)	-0.448121	0.128706	-3.481751	0.0012

R^2=0.43; SE=0.21; prob.(f-statistic) =0.00049; DW=2.13
Source: Authors' computation from E-views software.

Table 5 shows short run impact of unemployment rate on economic growth. The lag of GDP has a negative and statistical insignificant impact on the economic growth. The impact of unemployment rate on economic growth remains positive and statistically significant in the short run. The probability value of f-statistic is 0.0049, meaning that the overall regression is significant. The result also shows that the error correction term (ECM) is negative and at the same time significant with a very low probability value of 0.0012. The negative coefficient of ECM means that there is an adjustment in the system if any disequilibrium occurs or speed of adjustment towards equilibrium. Therefore, about 44.8 percent of the disequilibrium in GDP in the previous year is automatically corrected in the present year.

Table 6: Test for Autocorrelation and Heteroscedasticity

Test	Serial correlation Lm test	Prob.
F-Stat	1.212049	0.3127
Observed R2	3.426108	0.1803
Test	Heteroscedasticity	Prob.
F-stat	1.524266	0.1699
Observed R2	16.28705	0.1784

Source: Authors' computation from E-views software

From Table 6 we have two Null Hypotheses. The first Null Hypothesis is residuals are not serially correlated. The second Null Hypothesis is that residuals are not Heteroscedastic. The first part shows that the p values are more than 5%, meaning that we accept the null hypothesis and conclude that the model is free from auto correlation. The second part also has p value less than 5%, meaning that we accept the second Null Hypothesis and conclude that the model is free from heteroscedasticity.

Table 7: short run Granger causality test

Null hypothesis	Chi-sq.	Df.	Prob.
Unemployment rate does not Granger cause GDP	9.856743	1	0.0017
GDP does not Granger cause unemployment rate	1.882345	1	0.1701

Source: Authors' computation from E-views software

From table 7, the first null hypothesis that unemployment rate does not Granger cause GDP is rejected as the probability value of chi-sq. is less than 5% and concludes that unemployment Granger cause GDP. The second null hypothesis that GDP does not cause unemployment rate is accepted as the probability value of the chi-sq. is more than 5% and therefore concludes that GDP does not cause unemployment rate.

V. CONCLUDING REMARKS

This paper used Johansen co-integration test to test the long run relationship between unemployment rate and economic growth in Nigeria as the variables are co-integrated of order one. Both trace and max-eigen value statistics shows there is long run relationship between unemployment and economic growth. The result shows that unemployment has a positive impact on economic growth in the long run. This is contrary to Okun's law which stipulated a negative relationship between unemployment and economic growth. In the short run, GDP at lag 1 has a negative and statistical insignificant impact on the economic growth while unemployment has a positive and statistically significant positive impact on economic growth. The ECM coefficient is -0.448121 and statistically significant at 5%. This indicates that at 44.8% of the dis-equilibrium due to the shock in the previous years is adjusted back to the long run equilibrium in the current year.The Granger causality test shows that unemployment Granger cause GDP but GDP does not Granger cause unemployment rate in Nigeria. Therefore, it could be concluded that there is a unidirectional causality running from unemployment rate to GDP in Nigeria.

Thus, the paper recommends vocational education in tertiary institutions in Nigeria in order for young graduates to be self-employed rather than waiting for another person to employ them. Government should also diversify the economy in order to create more jobs.

REFERENCES

[1] Abdulsalam, S.A. and Abdullahi, B. (2016). Impact of Unemployment and Inflation on Economic Growth in Nigeria. International Journal of Business and Economic Science and Applied Research 9(1): 47-55

[2] Aliyu, R. S. (2012) Macroeconomic Policy, Output and Unemployment Dynamics in Nigeria: Is there Evidence of Jobless Growth? 53th Annual Conference of the Nigerian Economic Society.

[3] Aminu,U. Manu, D. and Salihu, Z.H (2013). An Empirical Investigation into the Effect of Unemployment and Inflation on Economic Growth in Nigeria. Interdisciplinary Journal of Research in Business. Vol.2. Issue. 12, pp.01-14.

[4] Atan, J.A (2013), Tax policy, Inflation and Unemployment in Nigeria. European Journal of Business and Management, vol.5, no 15, 2013.

[5] Bakare, A.S (2012). Stabilization Policy, Unemployment Crisis and Economic Growth in Nigeria. Universal Journal of Management and Social Sciences Vol. 2, No. 4.

[6] Breuch, T. S. and A. R. Pagan (1979). A Simple Test for Heteroscedasticity and Random Coefficient Variation. Econometrica Vol. 47 No.5.

[7] Brook, C. (2014), Introductory Econometrics for Finance, 3rd ed., Cambridge University Press, New York.

[8] Central Bank of Nigeria (2016) Quarterly Statistical Bulletin vol5, no3, September.

[9] Central Bank of Nigeria (2014) Statistical Bulletin vol25, December

[10] Central Bank of Nigeria (2005) Statistical Bulletin vol16, December

[11] Chinedu, I. O. (2015). Does Unemployment Significantly Impact on the Economic Growth of Nigeria? Retrieved from https://mpra.ub.uni-muechen.de/66966/

[12] Ditimi, A. and Ifeakachukwu, N. P. (2013). TheImpact of Unemployment rate on Productivity Growth in Nigeria: An Error Correction Modelling Approach. International Journal of Economic and Management Sciences Vol. 2, No. 8, PP 01-13.

[13] Erik, H. and Par, O (2007), Testing for Cointegration using the Johansen Methodology when Variables are near-integrated. WP/14. S

[14] Glynn, J.P. N and Verma, R (2007), Unit Root Test and Structural Breaks; A Survey with Applications. Retrieved from http://www.upo.es/Revmetcuant/art.

[15] Gujarati, D. N, Porter, D.C and Gunasakar, S. (2012). Basic Econometrics 5th Ed. New Delhi McGraw Hill Education Private Limited.

[16] ILO (1982). International Labour Organization. Thirteen International Conference,Geneva. Retrieved from https://www.oecd.org/statistics/data-collection/population.
[17] Kemi, F. A. and Dayo B. O. (2014). Unemployment and Economic Growth in Nigeria,Journal of Economics and Sustainable Development Vol. 5, No. 4.
[18] Mosikari, T.J (2013), the Effect of Unemployment Rate on Gross Domestic; Case Study of South Africa. Mediterranean Journal of Social Science. Vol.4, No. 6.
[19] National Bureau of Statistics (NBS), Unemployment/Under-employment Report, Q3, December, 2016.
[20] National Bureau of Statistics (NBS) Nigerian Gross Domestic Product Report. Issue 10, Q2 2016.
[21] Noor, Z.M. Nor, N.M and Ghani, J.A (2007), the Relationship between Output and Unemployment in Malaysia; Does Okun's law exist? International Journal of Economics and Management. 1(3); 337-344.
[22] Ogueze, V.C and Odim, O.K (2015), the cost of Unemployment and its effects on GDP Growth in Nigeria. World Applied Science Journal 33(1): 86-95.
[23] Okun, A.M (1962). Potential GNP: its Measurement and Significance. American Statistical Association, Proceeding of the Business and Economics section, PP. 98-104.
[24] Onwachukwu, C. I. (2015). Does Inflation Significantly Impact on Economic Growth in Nigeria? Global Journal of Human Social Science: Economics Volume 15 issue8 version 1.0

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