MKAR JOURNAL OF ECONOMICS AND DEVELOPMENT VOL.1 NO.1 2022.

ISSN 3043-5110 journals.umm.edu.ng

Analysis of the Effects of Government Expenditure on Employment Generation in Nigeria

[1]Abimiku Alanu C., [1]Dalis Dabwor T., [2]Otalu John A.

[1]Economics Department, University of Jos, Plateau State.

[2]Liberal Studies Department, Federal Polytechnic, Ado Ekiti.

Correspondence: [1]Abimiku Alanu C

Abstract

Government spending pattern is not only projected to guarantee stabilization but also to spur economic growth and expand employment opportunities. Therefore, the study examines the impact of government expenditure on unemployment in Nigeria. The study made use of time series data from 1985 to 2020. The study also employed Autoregressive Distributed Lag for the analysis of data collected and some diagnostic tests were also carried out such as serial correlation, heteroscedasticity test and stability test. The study found out that government expenditure has a negative and insignificant impact on unemployment in Nigeria. Also, interest rate has a positive and insignificant effect on unemployment in Nigeria whereas, trade openness has a negative and significant impact on unemployment in Nigeria. The study therefore recommended that there should be proper monitoring of government expenditure in order to reduce unemployment in Nigeria and interest rate should be reduced to a digit figure so as to spur real sector and thereby increase job opportunity in Nigeria.

Keyword: Government Expenditure, Unemployment, Interest Rate, Trade Openness and Short run Dynamic Model.

JEL Classification : C56, D78, D23

Introduction

Government expenditure remains an important instrument utilized in the process of development. It plays a pivotal role in the functioning of any economy at almost all stages of growth and development. Most developing and developed countries today use public expenditure to improve income distribution, direct the allocation of resources in desired areas, and influence the composition of national income (Assi, Dimson, Goodman & Andersen, 2019;

Vtyurina, 2020; World Bank, 2008). In developing countries for instance, the variation in government spending pattern is not only projected to guarantee stabilization but also to spur economic growth and expand employment opportunities (World Bank, 2015).

Unemployment refers to the condition in which persons who are willing and able to work within an economy are jobless (Anyanwuocha, 2005). It is also referred to as condition of not having a job, often referred to as being "out of work". Over the year, unemployment has increased substantially around the globe, reflecting weakness in global economic activities. Unemployment negatively impacts on government's ability to generate income and also tends to reduce economic activity. The high unemployment rates currently experienced by many economies and Nigeria inclusive reflect both cyclical conditions and deep-rooted weaknesses in labour market institutions and government expenditure programmes (Cottarelli 2012). However, unemployment was not too noticeable before and early years of Nigeria independence this could be as a result of population growth and earnings from agricultural export. Despite the success recorded in agriculture at national level, good number of persons were involved in subsistence agricultural practice both in the rural and urban. Secondly, crude oil export revenue was also a good complement to agricultural export revenue; these factors reduced pressures on white collar job and rural urban migration (Umar, 2015). Since unemployment problems was not a national threat in the early years of Nigerian independence, the first national development plan of 1962-1968, second national development plan of 1970-1974, and third national development plan of 1977-1980 did not prioritized unemployment/employment issues.

The decadence of agricultural sector as a result of over reliance on crude oil export revenue, and drastic fall in international price of crude oil in late 1970's into 1980's contributed to unemployment in Nigeria, with other inherent effects of unemployment such as; low per capita income, lack of access to good health care, lack of quality education, and poor standard of living. These factors constituted to prioritizing living standard and unemployment/employment issues in Nigeria's fourth national development plan of 1981-1985 and national rolling plans of 1990-1992, 1993-1995, 1994-1996 (Onwuemele, 2013;). Furthermore, since early 1980 due to fall in oil price globally, unemployment has been a concern of Nigerian government, therefore, government of Nigeria now resulting to expansionary fiscal policy that is public expenditure in order to solve the problem of unemployment and inherent effects. Public expenditure embarked so far by government of Nigeria in order to solve this menace and inherent effect encompasses both capital and recurrent expenditure. For instance, from 1981- 1995 average recurrent and capital government expenditures on social and community services stood at N3.65 billion and N2.20 billion respectively, these figures increased tremendously between 1996 and 2010, within this period average recurrent and capital government expenditures on social and community services stood at N168.33billion and N67.04 billion respectively. Also within the period of 2011 to 2016 there was an increase in both capital and recurrent expenditure on social and community services which stood at N 797.24 billion and N103.14 billion respectively (Central Bank of Nigeria CBN, 2016). Whereas the unemployment rate from 1980 till 2016 had shown a drastic increase. According to statistical reports, unemployment rate in Nigeria stood at 27.9% in 1980, 30% in 1983, 40% in 1995, 51% in 2011, and 57.04% in 2016 (NBS, 2016). Inspite of the huge amount devoted for both capital and recurrent expenditure, it has not been able to

stem the rate of unemployment rate in Nigeria instead the rate of unemployment has been on the rise.

Many past empirical studies centres on the relationship between fiscal policy and poverty reduction in developing countries including few studies on Nigeria that emphasized government expenditure and poverty nexus via economic growth with little attention on the channel of employment generation (Barro, 1991; Lucas, 1988; Rebelo, 1991; Hillman and Kojo 2004; Anyanwu, 1997; Warner, 2006). The few ones conducted in Nigeria had not reached a consensus as to the direction of relationship. For instance, Nurudeen and Usman, (2010), Saidu and Ibrahim, (2019), and Segun and Adelowokan, (2015) established negative relationship between government expenditure and unemployment while Idris and Bakar, (2017), Ihugba and Njoku, (2017), Jibir and Aluthge (2019a), Jibir and Babayo (2015), Srinivasan (2013), and Olayungbo and Olayemi (2018) found out that there was positive relationship between government expenditure and unemployment. As result of the conflicting result from various researchers there is need for further research to establish the relationship between government expenditure and unemployment in Nigeria. Against this backdrop, the study seeks to investigate the relationship between government expenditure and unemployment in Nigeria.

Theoretical Framework

Keynesian Theory of Income, Output, Employment and Interest

As postulated by Keynes (1939), public expenditures can contribute positively to economic growth by increasing government consumption through increase in employment, profitability and investment. The theory also holds that government can reverse economic downturns by borrowing money from the private sector and returning the money to private sector through various spending. This theory believes that active government intervention in the market place through government expenditure was the only method for ensuring full employment by ensuring efficiency in resources allocation and regulation of markets. Keynes posited that in the short run, economic growth through full employment is strongly influenced by total spending in the economy. This theory regards the economy as being inherently unstable and required active government intervention through spending to achieve full employment.

Keynesian theory posits that our ability to understand what determines the level of spending will help us to know what determines the level of employment, production of output and income in the economy. Keynesian theory suggests that public expenditure stimulates the economy, reduces unemployment and make households feel wealthier on the basis of government spending (Ojong and Hyacinth, 2013). This theory assumed that: (i) The real wage is equal to the marginal disutility of the existing employment; (ii) There is no such thing as involuntary unemployment in the strict sense; and (iii) Supply creates its own demand in the sense that the aggregate demand price is equal to the aggregate supply price for all levels of output and employment.

Empirical Literature

Abouelfarag and Qutb (2020) observed that government expenditure increased unemployment rate in Egypt and this could be due to higher expenditure on interest, subsidy and employee compensation. On the other hand, investment in the country was low.

Ebi and Ibe (2019), examined the causal relationship between government expenditure and unemployment from 1981 to 2017 using cointegration test. They found out that there was a long-run equilibrium relationship between unemployment rate (UEMR), recurrent expenditure (REXR) and capital expenditure (CEXR). However, there was negative and significant relationship between unemployment rate (UEMR) and recurrent expenditure (REXR). The negative relationship agrees with a priori expectations. On the other hand, relationship between unemployment rate (UNER) and capital expenditure (CEXR) is positive and significant.

Maku and Alimi (2018) investigated the impact of fiscal policy instruments on employment generation in Nigeria within the periods of 1980-2015. The study used the Augmented Dickey Fuller test to estimate the stationarity level, Engel Granger cointegration test for long-run relationship and ordinary least square for long-run estimates. The findings showed that government spending and manufacturing output had negative impact on unemployment rate in Nigeria. However, tax revenue and agricultural output have direct positive impact on unemployment rate in Nigeria. The findings suggest that government expenditure has the potential of creating more jobs if they were expended on appropriate capital projects that are capable of facilitating employment creation and linking rural-urban centres smoothly without encouraging migration.

Holden and Sparrman (2016) estimated the effect of government purchases on unemployment in 20 OECD countries, for the period 1980-2007. Their study revealed that an increase in government purchases equal to one percent of GDP reduces unemployment by about 0.3 percentage point in the same year. The effect is greater and more persistent under less "employment-friendly" labour market institutions, and greater and more persistent under a fixed exchange rate regime than under a floating regime. The effect is also greater in downturns than in booms. The effect on unemployment reflects a corresponding positive effect of increased government purchases on employment to population rate.

Owuru and Farayibi (2016) examined the effects of the three major fiscal policy variables namely; government capital expenditure, recurrent expenditure and budget deficit on poverty rate using a multiple regression analysis in the autoregressive distributed lag framework with ECM for the period 1980-2011. Although the ECM result which shows the speed of adjustment of the model from the short run to the long run equilibrium is on the average, yet the economy did not show any sign of much potency in using any of the selected fiscal policy variables to tackle the menace of poverty in Nigeria. Similarly, Egbulonu and Amadi (2016) studied the relationship between fiscal policy and unemployment rate in Nigeria for the period 1970 to 2013. The fiscal policy variables employed in the study consists of government expenditure, public debt stock (as proxy for government borrowing) and tax revenue. The results revealed a long run relationship between unemployment rate and fiscal policy instruments examined in the study. While, government expenditure and government debt stock exerted a negative effect on unemployment rate, government tax revenue exhibited a positive relationship with unemployment rate. This means that increase in tax rate increases unemployment in Nigeria. Abubakar (2016) investigated the effect of fiscal policy shocks on output and unemployment in Nigeria under the Keynesian framework by employing the Structural Vector Autoregression (SVAR) methodology to analyse annual series on the relevant variables for the period 1981-2015. Findings of the SVAR model shows that shocks in public expenditure and revenue have positive long- lasting effect on output while the effect

of revenue shock on unemployment was found to be negative in the short run. The study therefore suggests a restructuring in government spending pattern by allocating more to productive expenditure.

Umut (2015) evaluated the effect of fiscal policy in Netherland, using VAR technique. The study revealed that fiscal shocks exerted significant impact on GDP, unemployment rate, consumption and investment. The work suggests that unemployment rises in response to a fiscal contraction whereas it falls to fiscal expansion.

Nwosa (2014) examined the impact of government expenditure on unemployment and poverty rates for the period 1981 to 2011. Using an Ordinary Least square (OLS) estimation technique, the study established that government expenditure has positive and significant impact on unemployment rate while it has an insignificant impact on poverty rate. These results are in contradiction to the Keynes propositions

Egunjobi (2014) established the nature of the relationship between poverty and unemployment over the period 1977 – 2010. The paper also ascertained the causal link between poverty and unemployment. The results showed that unemployment has a positive influence on poverty while government investment on infrastructures and human investment has a negative influence on poverty. Furthermore, there is no causal link between poverty and unemployment. The study recommended that government should intensify the provision of infrastructures and implementation of appropriate policies which will create a conducive environment needed for investment to thrive.

Yongjin (2011) took a sample of 32 advanced and 51 developing countries and examined the impact of government size on economic growth and unemployment during the period 1996–2006. He came to the conclusion that larger government size had a positive effect on unemployment and the impact was much more in developing countries than in developed countries.

Methodology

Model Specification

From the objective one of this study, the relationship between unemployment as a proxy for economic development and government expenditure as a proxy for fiscal policy is to be investigated. The mathematical specification of the model that expresses the relationship between government expenditure and unemployment rate is:

$$uem = f(tge) \quad \text{---------- (1)}$$

Where:

uem= unemployment rate

tge= total government expenditure

From the work of Bierens and Broersma (1993) a functional relationship was postulated between interest rate and unemployment. Interest rate is included in the model as control variable such that equation (1) can be expressed as:

$$uem = f(tge, inr) \quad \text{---------- (2)}$$

Where:

i/r = interest rate

Nigeria is an open economy, therefore the external sector is represented by trade openness. From the work of Ikeachukwu, Kalu & Gulcay (2015) trade openness influences unemployment and therefore, it is included in equation (2):

uem = f(tge, inr, ton) ---------- (3)
Where:
ton= trade openness

Expressing equation (3) in a linear stochastic form (or econometric form) gives:

$uem = \alpha_0 + \alpha_1 tge + \alpha_2 inr + \alpha_3 ton + \mu_1$ ---------- (4)
Where:
α_0 = Intercept or autonomous parameter estimates for fiscal policy
α_1 – α_3 = coefficient of fiscal policy in the unemployment equation
μ_1 = The error term

The introduction of natural logs to equations (4) would be more efficient in estimating the parameters because it helps convert and integrate different values (of a variable) into a common denominator and brings different units to a common base for measurement (Omolade & Ngalawa, 2014). On the strength of these, taking the natural logs of both sides of equation (4) will result in equations (5), thus:

$loguem = \alpha_0 + \alpha_1 log(tge) +$
$\alpha_2 \log inr + \alpha_3 \log ton + \mu_1$ ---------- (5)
Where:
log = Natural log

Estimating Techniques:

Unit Root Test

This study employed Augmented Dickey-Fuller test developed by Dickey and Fuller (1978) to ascertain the stationarity status of the variables used in the study. The ADF test is conducted based on the model below:

$$\boldsymbol{y_t - y_{t-1} = \Delta y_t = a_o + a_{1y_{t-1}} + \in_t} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (6)$$

Where y is a non-stationary series; a_0 and a_1 are parameters to be estimated and $\in_t$ is a random disturbance term. The null hypothesis for the presence of a unit root in the series is rejected if the Dickey-Fuller statistic is less than the critical value at a given apriori alpha level and the alternative hypothesis of a stationary time series is accepted.

ARDL Bounds Test.

This study depends on the ARDL bounds test approach to co-integration developed by Pesaran et al., (2001) to test if there is long-run cointegration between the dependent variable and independent variables used in the study. The ARDL bounds test approach to co-integration has been adjudged to perform better than other orthodox cointegration techniques. This is due to the fact that it can accommodate the variables that are either I(1) or I(0) or the combination of the two and the method yields unbiased estimates. (Harris & Sollis 2003).

Thus, we specified conditional general form of the ARDL model in the equation below

$$\Delta lnuem_t = \delta_0 + \delta_1 lnuem_{t-1} + \delta_2 lntge_{t-1} + \delta_3 lnton_{t-1} + \delta_4 lninr_{t-1} + \sum_{i=1}^{v} \theta_{1i} \Delta lnuem_{t-1} + \sum_{i=1}^{v} \theta_{2i} \Delta lntge_{t-1} + \sum_{i=1}^{v} \theta_{3i} \Delta ton_{t-1} + \sum_{i=1}^{v} \theta_{4i} \Delta inr_{t-1} + e_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (7).$$

Results and Discussions

This section presents and explains the empirical result obtained on the effect of government expenditure on unemployment in Nigeria. Hence, this section begins with pre-estimation test which include descriptive statistics, correlation matrix and unit root test in order to examine time series characteristics of the variables before the actual estimation.

Table 1: Descriptive Statistics

	UEM	TGE	TON	INR
Mean	4.337083	1.37E+10	6.22E+12	18.47587
Median	3.917000	4.44E+09	2.61E+12	17.69000
Maximum	9.714000	3.78E+10	2.28E+13	31.65000
Minimum	1.240000	9.98E+08	4.76E+09	9.433333
Std. Dev.	1.814975	1.39E+10	7.25E+12	4.171296
Skewness	1.586121	0.650843	0.947338	0.639323
Kurtosis	5.160214	1.726042	2.533931	4.796313
Jarque-Bera	22.09447	4.976030	5.710531	7.292516
Probability	0.000016	0.083075	0.057541	0.026089
Sum	156.1350	4.93E+11	2.24E+14	665.1314
Sum Sq. Dev.	115.2947	6.73E+21	1.84E+27	608.9899
Observations	36	36	36	36

Source: Authors' computation using E-views 9, 2022.

Table above shows the descriptive statistics of the variables under consideration. It can be observed from the table that the mean value of unemployment (UEM), government expenditure (TGE), trade openness (TON) and interest rate (INR) are 4.337083, 1.37E+10, 6.22E+12, and 18.47587 respectively. Also the median value of unemployment (UEM), government expenditure (TGE), trade openness (TON) and interest rate (INR) are 3.917000, 4.44E+09, 2.61E+12, and 17.69000 respectively. Considering the standard deviation, the values of unemployment (UNR), government expenditure (TGE), trade openness (TON) and interest rate (INR) are 1.814975, 1.39E+10, 7.25E+12, and 4.171296 respectively. This implies that the variables are stable over time. However, from the table, the asymmetric behavior of the variables which is measured by skewness shows that unemployment (UEM), total government expenditure (TGE), trade openness (TON) and interest rate (INR) have values of 1.586121, 0.650843, 0.947338, and 0.639323 respectively. this implies that all the variables are positively skewed (right tailed). Also, the peakness and density of the variables

which is measured by kurtosis shows that unemployment (UEM), total government expenditure (TGE), trade openness (TON) and interest rate (INR) have values of 5.160214, 1.726042, 2.533931, and 4.796313. The values of unemployment and interest rate are greater than 3 therefore they are leptokurtic while the values of government expenditure and trade openness are less than 3 hence they are Platykurtic. Finally, Jargue-Bera which measures the normality of the series shows that the probability values of all the variables from the table which is less than 0.05 shows that all the variables are not normally distributed.

Table 2: Correlation Matrix

Variables	UEM	TON	LTGE	INR
UNR	1.000000			
TON	0.410374	1.000000		
LTGE	0.450454	0.786115	1.000000	
INR	-0.041389	-0.284579	-0.429634	1.000000

Source: Authors' computation using E-views 9, 2022.

Table 2 above shows the correlation matrix of the variables under consideration. It can be noted that most of the variables showed a positive relationship with unemployment that is trade openness and government expenditure whereas, interest rate shows a negative relationship with unemployment.

Table 3: Unit Root Test

Variables	**T-Statistics**	**Order of Integration**
UEM	-4.445460	I(1)
TON	-2.921942	I(0)
LTGE	-5.375889	I(1)
INR	-4.786646	I(0)

Source: Authors' computation using E-views 9, 2022.

Table 3 shows the result of unit root test of the variables under consideration. From the result it can be deduced that both unemployment (UEM) and log of government expenditure (LTGE) are integrated of order one I(1) while both trade openness (TON) and interest rate (INR) are integrated of order zero I(0). Since the variables exhibits different levels of integration that is I(0) and I(1) hence the use of ARDL is appropriate for the analysis of this study.

Table 4: ARDL Bound Test

Significant Level	**F-statistics**	**Lower Bound I(0)**	**Upper Bound I(1)**
5%	3.467079	3.23	4.35
1%		4.29	5.61

Source: Authors' computation using E-views 9, 2022.

From the table above, there is short run relationship because the F-statistics is greater than the lower bound 3.23 and but less than higher bound 4.35. Hence, it is necessary to estimate the short-run dynamic model only.

Table 4: Short Run Dynamic Model

Variable	Coefficient	Prob
D(UEM(-1))	0.251421	0.0136
D(INR(-1))	0.245049	0.9931
D(LTGE(-1))	-0.065807	0.7419
D(TON(-1))	-1.13E-13	0.0009
C	0.251421	0.0136
R-squared: 0.356659 Adjusted R-squared: 0.267922 S.E. of regression: 0.497703 Sum squared resid: 7.183533 Log likelihood: -21.81623 Durbin-Watson stat: 1.712439 F-Statistics: 4.019291 Prob(F-statistic): 0.010299		

Source: Authors' computation using E-views 9, 2022.

The result from the above output shows that lag of dependent variable (UEM(-1) has a significant and positive relationship with dependent variable (UEM). This indicates that a 1% increase in (UEM(-1) will lead to 25.14 increase in unemployment. This is also applicable to INR which also has a positive and insignificant relationship in the short run. Hence a 1% increase in INR will increase unemployment by 24.51, this is against the a priori expectation. Furthermore, LTGE has insignificant and negative relationship with unemployment in the short run, hence a 1% increase in LTGE will reduce unemployment by 6.5 while TON has a negative and significant relationship with unemployment. This implies that a 1% increase in trade openness (TON) will reduce unemployment by 111.3.

However, the coefficient of determination (R^2) shows that the explanatory variables employed in the study explains approximately 35.67% of total variation in unemployment. This indicates that the variables used in the model are appropriate and suitable for the analysis. The Durbin Watson statistics of 1.71 falling in between the standard of 1.5 and 2.5 also shows that the variables are sufficient to explain the dependent variables. Conclusively, the F-statistics of 4.019291(p=0.010299) shows that the independent variables jointly influenced the dependent variable.

Table 5: Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.226655	Prob. F(2,27)	0.7987
Obs*R-squared	0.561409	Prob. Chi-Square(2)	0.7553

Source: Authors' computation using E-views 9, 2022.

The serial correlation test result obtained shows that the null hypothesis of a serial correlation is rejected and the corresponding probability values of the F-statistics are statistically insignificant at 5% level. Thus, there is a conclusion that there is no serial correlation among the variables under consideration.

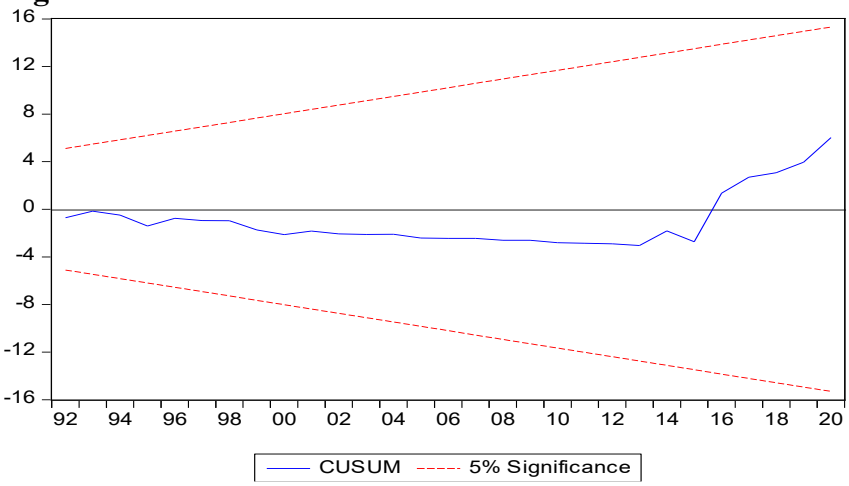
Table 6: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.833187	Prob. F(4,29)	0.1494
Obs*R-squared	6.861948	Prob. Chi-Square(4)	0.1434

Source: Authors' computation using E-views 10, 2022.

From the result, the probability of Chi-Square (17) is 0.3164 and this is greater than 0.05 at 5% significant level and therefore, there is no evidence to reject the null hypothesis. This implies and therefore confirms the absence of heteroscedasticity in the model. That is the error terms are homoscedastic i.e., they have constant variance in repeated sampling.

Figure 1: Cusum Test



The Cumulative Sum of Recursive Residual (CUSUM) as seen in figure 1 above reveals that the residuals falls between 5% confidence interval which implies that the model did not suffer from any econometric problem hence the series under consideration are stable.

Discussion of findings

From the empirical findings, it can be observed that government expenditure (LTGE) exerts negative relationship with unemployment but found insignificant. This implies that government expenditure fails to influence unemployment in Nigeria. This might not be unconnected with the fact that government expenditure is not stable over the time under review. This finding is in tandem with the work of Ndubueze, Okoli, and Onwuka (2020) who found out that government expenditure which is meant to contribute to the reduction of unemployment in Nigeria failed to do so. Also, interest rate has a positive and insignificant relationship with unemployment in Nigeria. This means that interest rate also fails to influence

unemployment in Nigeria. This finding aligns with the work of Babalola (2013) who found that there is positive relationship between interest rate and unemployment in Nigeria. Finally, trade openness (TON) has a negative and significant relationship with unemployment in Nigeria. The implication is that the more the economy is open, the lesser unemployment in the country. This empirical result is concomitant with the established theories.

Conclusion and Recommendation

From the finding of this study, some deduction about the relationship between government expenditure and unemployment in Nigeria can be drawn. Following the result of the findings, government expenditure has a negative relationship but fail to have significant impact on unemployment in Nigeria. The implication is that in spite of volume of government expenditure under the years reviewed, the variable fails to influence unemployment. Also, interest rate has a positive and insignificant impact on unemployment in Nigeria. This implies that the interest rate regime in Nigeria does not encourage reduction in unemployment. Finally, trade openness had a negative relationship but showed a significant impact on unemployment. Consequently, this variable shows an important factor that determines unemployment in Nigeria.

Considering the findings of this study, it is recommended that government expenditure should be monitored in such a way to influence or reduce unemployment in Nigeria. Also, interest rate in Nigeria should be reduced to a digit number so as to encourage the real sector of the economy which increases employment opportunities in Nigeria.

References

Anyanwuocha, R.A.I. (Ed.). (2005). *Fundamentals of economics* (2rd ed). Ibadan, NIGERIA: Africana First Publishers Limited.

Assi, R., Dimson, J. Goodman, A. & Andersen, J. S. (2019). Spending reviews: a more powerful approach to ensuring value in public finances. Public and Social Sector Insights, London: McKinsey & Company.

Barro, R. J. (1991). Economic growth in a cross section of countries. Quarterly Journal of Economics, 106, 407-443.

Cottarelli, C. (2012). Walking hand in hand: Fiscal policy and growth in advanced economies. IMF working paper.

Dickey, D., and W. A. Fuller (1978). Distribution of the Estimates for Autoregressive Time series with Unit Root. Journal of the American Statistical Association, 74 (June), 427– 31.

Harris, R., & Sollis, R. (2003). Applied Time Series Modelling and Forecasting. Chichester: Wiley

Idris, M., & Bakar, R. (2017). Public sector spending and economic growth in Nigeria: In search of a stable relationship. Asian Research Journal of Arts & Social Sciences, 3(2), 1-19.

Ihugba O.A., Njoku A.C. (2017). Social and community services government expenditure and Nigeria's economic growth. In: Tsounis N., Vlachvei A. (eds) Advances in Applied Economic Research. Springer Proceedings in Business and Economics. Springer, Cham. https://doi.org/10.1007/978-3-319-48454-9 5.

Jibir, A. & Babayo, H. (2015). Impact of government expenditure and economic growth: Empirical evidence from Nigeria. IOSR Journal of Economics and Finance, 3(2), 61-68.

Jibir, A., & Aluthge, C. (2019a). Modelling the determinants of government expenditure in Nigeria. Cogent Economics & Finance, 7(1), 10.1080/23322039.2019.1620154.

Jibir, A. & Aluthge, C. (2019b). Fiscal Policy Operation in Nigeria: Trends, Magnitude and Challenges. Turkey: KSP Book Publishers.

Nurudeen, A. & Usman, A. (2010). Government expenditure and economic growth in Nigeria 1970-2008. A disaggregated analysis. Business and Economic Journal, 4(3), 63-82.

Olayungbo, D. O. & OlayemI, O. F. (2018). Dynamic relationships among non-oil revenue, government spending and economic growth in an oil producing country: Evidence from Nigeria. Future Business Journal, 4(2), 246-260.

Onwuemele, J.U.J. (2013). Government Expenditure and Economic Growth: Business and Economics. *Scottish Journal of Political Economy, 41(5),* 286 – 297.

Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. Journal of Applied Econometrics, 16(3), 289-326.

Saidu, I. E., & Ibrahim, A. (2019). Impact of Public Capital Expenditure on Economic Growth in Nigeria. Lapai Journal of Economics, 3(1), 169-177.

Srinivasan, P. (2013). Causality between public expenditure and economic growth: the Indian case. Journal of Economic and Management, 7(2), 335-340.

Umar, U. (2015). Development planning and employment generations: Achievements,

Challenges and prospects in Nigeria. *JORIND, 11(1),* 1596-8308.

Vtyurina, S. (2020). Effectiveness and equity in social spending: the case of Spain. IMF Working Paper, No. WP/20/16.

World Bank (2008). Public Expenditure Management Handbook. Washington, D.C.: The World Bank Group.

World Bank (2015). Introduction to Public Sector Governance and Accountability Series: Public Expenditure analysis. Washington, D.C.: The World Bank Group.