GOVERNMENT EXPENDITURE, UNEMPLOYMENT AND POVERTY RATES IN NIGERIA

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Abstract
This study examines the impact of government expenditure on unemployment and poverty rates in Nigeria for the period 1981 to 2011. Using an Ordinary Least square (OLS) estimation technique, the study observes that government expenditure has positive and significant impact on unemployment rate while it has a negative and insignificant impact on poverty rate. Thus, this study recommends that urgent attention should be accorded to rising unemployment and high poverty rates in order to achieve the objective of being among the 20 economies of the world by 2020 and of achieving her MDG goal of halving poverty rate by 2015.
Keywords*:* Government expenditure, unemployment, poverty

Introduction

The failure of the Classical economists in resolving the macroeconomic problems of the Great depression of the 1930s has been pointed at for the emergence of the Keynesian economists' doctrine of demand management in the economy (Dornbusch et al., 2002). Since the emergence of Keynes, government both in developed and developing economies has assumed a pivotal role in the management of the economy which include direct investment in production, provision of essential infrastructural facilities, maintenance of law and internal/external security and initiating of national plans for even economic development. In recent years, the role of government has included financial bail-outs of the entire economy or a particular sector of the economy and these interventions have increased the expenditure of the government.

Despite the rising trend in government expenditure in Nigeria, it is paradoxical and worrisome to note that social economic indicators has shown gloomy pictures. Although the rate of economic growth has been impressive from 2000 to 2011 (with an average growth of 6.4 percent); the rate of unemployment has been on the increase (rising from 1.8 percent in 1995 to 23.9 percent in 2011 (CBN annual report for various years)); about 66 million of the Nigerians population lack access to portable water (WHO/UNICEF cited in Okpi, 2012); the mortality rate is put at about 630 deaths/100,000 live births (WDI, 2012) and a gini coefficient of 48.83 (WDI, 2012). The above indices clearly reflect a depressing state of poverty rate, which undoubtedly has also been on the increase (from 54.4 percent in 2004 to 71.5 in 2011 (NBS, 2012)).

The paradoxical situation in Nigeria between rising government expenditure and social economic indicators (especially unemployment rate and poverty rate) makes it unclear on the exact relationship between government expenditure and unemployment rate on the one hand and between government expenditure and poverty rate on the other hand. Although, empirical literature on this issue have produced inconclusive results (Holden and Sparrman, 2013), the issue is even more worrisome as previous indigenous studies have paid little or no attention to this issue. Bulk of the indigenous studies on government spending has focused on government spending-economic growth nexus (see Uma et al, 2013; Onakoya and Somoye, 2013; Bakare, 2012; Nworji et al., 2012; Taiwo and Agbatogun, 2012). Therefore, the examination of this issue becomes pertinent because, increasing unemployment and poverty rates can have significant negative social and economic consequences—making reforms more difficult, constraining economic growth, undermining social cohesion and stability, derailing various ongoing policy reforms (Lin et al., 2008) and even undermining the country's long term desire of achieving improved national development. Thus, without an utmost and urgent attention to this issue, it is doubtful how the Nigerian government hopes to attain the country's goal of becoming one of the top 20 economies by year 2020 and also in achieving the Millennium Development Goal (MDG) of halving poverty by 2015. This study therefore attempts to gauge the extent to which government expenditure affects unemployment and poverty rates and also looks at the implication of this for national development.

In addition to the introductory section, the remaining part of this study is as follows: section two focused on the review of related literature while section three focused on the research methodology. In section four, the analysis and interpretation of empirical results is discussed while the conclusion and policy recommendations is the main focus of section five.

Literature review

Holden and Sparrman (2013) examined the effect of government purchases on unemployment in 20 OECD countries for the period 1980 to 2007. The study observed that an increase in government purchases which equals one percent of GDP reduced unemployment by about 0.3 percentage point in the same year. This effect was observed to be greater in downturns than in booms, and also greater under a fixed exchange rate regime than a floating regime. Okulegu (2013) examined the effect of government spending in agriculture on poverty reduction in Nigeria for the period 1980 to 2009. Utilizing a multiple regression model based on Ordinary Least Square (OLS) technique, the study observed that government spending had significant effect on poverty reduction in Nigeria. Specifically, the study observed that a one percent increase in Agricultural Credit Guarantee Scheme Fund (AGCSF) will decrease poverty rate by 0.06%. The study recommended that government funding on agriculture should be channelled to farm mechanization as this would aid employment and improve food production, thereby reducing poverty.

Nazar and Mahmoud (2013) examined the relationship between government spending and poverty rate in Sistan and Baluchestan Province of Iran for the period 1978 to 2008. Employing an Autoregressive Distributed Lag (ARDL) technique, the study observed that constructive expenditures have positive effect on poverty reduction while current expenditure of government had negative effect on poverty reduction. Olofin (2012) examined the effects of components of defense spending on poverty reduction in Nigeria for the period 1990 to 2010. The study constructed poverty index from human development indicators using principal component analysis and four models were estimated using Dynamic Ordinary Least Square (DOLS) technique. Two of the models used poverty index as dependent variable while the other two used infant mortality rate as dependent variable. The findings of the study showed that military participation rate, military expenditure per soldier and population were statistically significant and positively related to poverty index while trade and output per capita square had positive but insignificant effect on poverty index. Further, population which was insignificant in model four was significant in model two. The study also observed that military expenditure, secondary school enrolment and output per capita were negatively related to poverty level. However, only total military expenditure was found to be statistically significant in model one and three, while output per capita was found to be statistically significant in model three. The study concluded that there exists trade-off between the well-being and capital intensiveness of the military in Nigeria, pointing to the vulnerability of the poor among the Nigerians.

Adawo et al. (2012) examined issues relating to high unemployment rate in Nigeria. The study observed that labor force in Nigeria grew at more or less a steady rate of 0.3% every year while gross domestic product (GDP) growth rate grew at 3.5% over a period of 33 years, suggesting that the Nigerian economy experienced a jobless growth. The study also noted that the causes of unemployment in Nigeria include: poor infrastructure; non-diversification of the economy; insecurity and poor educational system that does not readily produce employable graduates. The study recommended that governments at all levels should partner with the private sector and diversify the economy in order to create jobs. Danjuma and Bala (2012) explored role of governance in employment generation in Nigeria. The study employed primary data obtained through the use of interviews. The findings of the study showed that unemployment rate in Nigeria had created tension and hatred between the haves and have not leading to communal clashes; resulted in the emergence of militants groups (like the Boko Haram sect and Niger Delta militant), prostitution, armed robbery and child trafficking, constituting hiccups to security of lives and properties. The study recommended that investment in education will help in skills development and training.

Mehmood and Sadiq (2010) examined the relationship between the government expenditure and poverty rate in Pakistan for the 1976 to 2010. Utilizing an error

correction modelling technique, the study observed that a negative relationship between government expenditure and poverty rate in Pakistan. From the above review, it is observe that previous endogenous studies have paid little attention on the effect of government expenditure on unemployment and poverty rates in Nigeria. This study seeks to fill this gap in knowledge.

Model specification

The focus of this study is to examine the extent to which government expenditure affects unemployment and poverty rates in Nigeria over the period 1980 to 2011. To achieve this, a simple linear regression equation is specified below:

$Y^i_t = f\ (GEX_t,)$ ……………………………………….…………… (1)

where *'Y'* is the dependent variable; *'i'* is unemployment rate and poverty rate; *'GEX'* is aggregate government expenditure and *'t'* is current time period. Introducing other explanatory variables: public debt (DBT) and economic growth (EG), equation (1) becomes:

$Y^i_t = f\ (GEX_t, DBT_t, EG_t)$ ………………………………….…………… (2)

Log-linearizing equation (2) and introducing constant and error term, we have:

$\log Y^i_t = \delta_0 + log\delta_1 GEX_t + log\delta_2 DBT_t + log\delta_3 GDP_t + \mu_t$ ……………..….. (3)

Equation (3) will be estimated via an ordinary least square technique. However, before estimating equation (3), various preliminary tests will be conducted. These include: descriptive statistics, unit root test and the co-integration test.

Variables description and measurement

Unemployment rate *(UEM)* is measured by the proportion of the labour force that are unemployed as provided by the National Bureau of Statistics (NBS); poverty rate *(POV)* is measured by the poverty incidence; government expenditure *(GEX)* is measured by the aggregate of capital and recurrent expenditures of the government; public debt *(DBT)* is measured by the total of internal and external debts of the government and economic growth *(EG)* is measured by real gross domestic product (GDP) calculated as the ratio of nominal gross domestic product to consumer price index.

Empirical findings

Descriptive statistics

This study starts its empirical analysis by carrying out a descriptive statistics of the variables in order to verify the characteristics of the variables. From the table I, the standard deviation shows that public debt *(DBT)* is the most volatile variable while unemployment rate is the least volatile among the variables. The skewness statistic reveals that all the variables are positively skewed. The kurtosis statistics reveals that government expenditure *(GEX)* is leptokurtic implying that the distribution is peaked relative to the normal distribution while the other variables are platykurtic, suggesting that their distributions are flat relative to normal distribution. Lastly, the Jarque-Bera statistic rejects the null hypothesis of normal distribution for government expenditure at 5% critical value while the null hypothesis of normal distribution for the others variables are accepted at the same critical value.

Table 1. Descriptive statistics

Variables \ Statistics	UEM	POV	GEX	DBT	EG
Mean	7.8469	54.8969	937071.8	2054110	363969.5
Std. Dev.	6.4382	14.8016	1284684	2134232	199126
Skewness	0.9149	0.3893	1.4631	0.7120	0.8910
Kurtosis	2.6788	2.4381	3.9785	2.0911	2.7991
Jarque-Bera	4.6022	1.2294	12.6932	3.8051	4.2875
Probability	0.1001	0.5408	0.0018	0.1492	0.1172
Observations	32	32	32	32	32

Source: Author's computation using E-views 7

Unit root test

Examining the properties of the variables is important because if two or more variables in a regression model are not stationary, then the standard errors produced by the regression estimate would be biased, making the conventional principle used in evaluating the existence of relationship among the variables in the model unreliable (Mahadeva and Robinson, 2004). The properties of the variables in equation (3) are examined by the Augmented Dickey-Fuller (1981) unit root test and the result is presented in table 2. From the table, all the variables were observe to be integrated of order (1), that is, the variables are I(1) series.

Table 2. Unit root test

Augmented Dickey-Fuller (ADF) Test

Variables	Level	1st Difference	Status
UEM	0.5246	-5.0159*	I(1)
POV	-1.9737	-3.5852*	I(1)
LGEX	-0.9638	-7.1598*	I(1)
LDBT	-2.6363	-4.1531*	I(1)
LEG	2.2294	-36.6255*	I(1)
Critical Values	Level	1st Difference	
1%	-3.6617	-3.6702	
5%	-2.9604	-2.9640	
10%	-2.6192	-2.6250	

Source: Author's computation using E-views 7. Note: *=1% and **=5% significance level.

Co-integration test

Given that the variables are integrated of order one, this study proceeds to examine the presence of co-integration among the variables. To this end, the Johansen co-integration technique is utilized because the specified model is multi-variate and also there is the possibility of having more than one co-integrating vector. As observed on table 3 and with respect to Model-UEM, both the trace and maximum-Eigen statistics reject the null of no co-integration for r=0 and r≤1 at five percent critical values. Both the trace and maximum-Eigen estimates reveal that there are two co-integration equations at five percent critical value. With respect to Model-POV, both the trace and maximum-Eigen statistics also rejected the null of no co-integration at r=0, while the null hypothesis of no co-integration at r≤1 was not rejected, indicating the existence of one co-integration equation at five percent critical value. The implication of the co-integration results of both models indicates that linear combinations of the variables in equation (3) were found to be stationary and co-integrated.

Table 3. Summary of the co-integration estimate

	Trace Test				Maximum Eigen value Test			
	Null	Alternative	Statistics	95% Critical Values	Null	alternative	Statistics	95% Critical Values
Model –UEM	r=0	r≥1	68.692	47.856	r=0	r=1	35.017	27.584
	r≤1	r≥2	33.675	29.797	r≤1	r=2	21.366	21.132
	r≤2	r≥3	12.309	15.495	r≤2	r=3	11.967	14.265
	r≤3	r≥4	0.341	3.841	r≤3	r=4	0.341	3.841
Model –POV	r=0	r≥1	60.411	47.856	r=0	r=1	38.603	27.584

r≤1	r≥2	21.808	29.797	r≤1	r=2	15.488	21.132
r≤2	r≥3	6.320	15.495	r≤2	r=3	6.127	14.265
r≤3	r≥4	0.193	3.841	r≤3	r=4	0.193	3.841

Source: Author's computation using E-views 7

Regression estimates

The regression estimate on the effect of government expenditure on unemployment and poverty rates is depicted on table 4 below. From the table, the coefficient of determination (R^2) for models UEM and POV are 0.673 and 0.669 respectively, suggesting that about 67 percent of variations in unemployment and poverty rates are explained by variables within the models. Further, the F-Stat. which measures the overall significance of models is statistically significant (as shown by the p-values), implying that the models are fit and appropriate for the empirical estimates.

With respect to model-UEM, it is observe that government expenditure (LGEX) and economic growth (EG) had a significant and positive effect unemployment rate while public budget had a negative and insignificant effect on unemployment rate at five percent. This suggests that an increase government spending and economic growth will escalate the unemployment rate in Nigeria. With respect to the focus of this study, the observe positive relationship between government spending and economic growth is in line with that obtained by Bruckner and Pappa (2012) and in contrast to those obtained by Auerbach and Gorodnichenko (2012), International Monetary Fund (2010) and Monacelli et al. (2010). The increase in unemployment rate resulting from an increase government spending may reflect the outcome of continuous increase in the establishment of higher institution which has continuously produced graduates on yearly basis, without a corresponding provision of employment opportunities to absorb the graduates. It may also reflect the insensitivity of the government to unemployment issues in Nigeria even in the face increasing government spending.

The evidence of a positive effect of economic growth on unemployment rate is in line with that obtained by Adawo et al. (2012) that the Nigerian economy is experiencing a jobless growth. One reason for this jobless growth could be pinched on the fact that the Nigerian economy has over the years been driven by oil production whose activity is rent seeking in nature rather than the industrial, agriculture or service sectors that can absorb the large unemployed population.

Model-POV on the other hand, indicates that government expenditure and economic growth had negative and insignificant effect on poverty rate while public debt had a significant and positive effect of poverty rate, suggesting that an increase in public debt will increase the level of poverty in Nigeria. The observed relationship between government expenditure and poverty rate is in contrast to that obtained by Okulegu (2013). The insignificant effects of government expenditure and economic growth clearly depict the Nigeria economy, where despite the rising level of government expenditure and the increased growth achieved over the years, the level of poverty has equally been on the increase. This undoubtedly reveals that government spending has been inactive at significantly reducing the level of poverty. It also explains that the increased growth experienced in the country over the years has been unevenly distributed and has been benefited the poor.

The import from the above findings is that government spending over the years has been inactive in tackling the problems of rising unemployment and poverty rates which pose a serious threat to achieving national developmental objectives of vision 2020 and of halving poverty rate in 2015 in Nigerian.

Table 4. Regression estimate on the effect of government expenditure on unemployment and poverty rates in Nigeria

	Independent variables				
Dependent variables	LGEX	LDBT	LEG	R^2	F-Stat.

	3.0515	-2.0925	4.7675		19.18
UEM	[0.0067]*	[0.0648]	[0.0288]**	0.673	[0.0000]
	-1.0670	8.4042	-5.5530		18.822
POV	[0.6613]	[0.0024]*	[0.2558]	0.669	[0.0000]

Source: Authors' Computation Using E-views 7. * and ** denotes 1% and 5% respectively, and the values in the parenthesis are the p-value.

Conclusion

This study examined the impact of government expenditure on unemployment and poverty rates in Nigeria and the implication of this for national development. The study covered the period of 1980 to 2011. Base on the regression estimate, government expenditure had positive and significant impact on unemployment rate while it had a negative and insignificant impact on poverty rate. The above result clearly reflects the presence situation in Nigeria where despite the rising level in government expenditure, the level of unemployment and poverty rates has been on a steady increase. This finding also indicates that the drive of the Nigeria government to achieve her national development objectives is in doubt. Thus, to improve this situation, this study recommends that urgent attention should be given to the national issues of rising unemployment and high poverty as they affect national productivity and living standards of the Nigerian economy. For the moment, the government should re-direct its policy of creating additional higher institutions to the establishment of employment opportunities in all states which can absorb the graduates from the already existing universities. There is also the need for government to provide basic business enhancing facilities like stable power supply, portable water and internal security. The provision and availability of these facilities will encourage the unemployed to go into small and medium scale business which would reduce the rising level unemployment and also contribute to fighting the high poverty rate. The provision of such facilities will also act as incentives for investors (both foreign and domestic) in the economy. However, such investment should be diversified from the oil sector to manufacturing, agricultural and service sectors which can absorb a large amount of the unemployed in the country.

More so, there is the need for government at the national, state and local levels to engage a nationwide empowerment and training programs for the unemployed and even the undergraduates; and loans with reduced interest rates payable over a longer period of time, given to participants' with viable and feasible projects. Apart from the above, there is the need for government to ensure that the poor benefits from the increased growth achieved in recent years. This can be done through the provision good and basic medical facilities, payment of unemployment benefits for the unemployed and provision of basic amenities like good portable water, uninterrupted power supply and motorable roods in the villages and rural communities. All these measures will enhance the government in achieving her development objectives.

Reference

Adawo, A. M., E. B. Essien, and N.U. Ekpo (2012), "Is Nigeria's Unemployment Problem Unsolvable?" *Current Research Journal of Social Sciences*, 4(6), 389-395.

Auerbach, A., and Y. Gorodnichenko (2012), "Fiscal Multipliers in Recession and Expansions," NBER Chapters, *In Fiscal Policy after the Financial Crisis*, National Bureau of Economic Research, Inc. 63-98.

Bakare, A. S. (2012), "Assessing the Role of Public Spending for Sustainable Growth: Empirical Evidence from Nigeria," *Journal of Economics and Sustainable Development*, 3(2), 50-57.

Bruckner, M., and E Pappa (2012), "Fiscal Expansions, Unemployment, and Labor Force Participation," *International Economic Review*, 54(4), 1205-1228.

Central Bank of Nigeria (CBN) *Annual Reports for Various Years*, Nigeria. http://www.cenbank.org/Documents/annualreports.asp (accessed June 2, 2013).

Danjuma, A., and A. K. Bala (2012), "Role of Governance in Employment Generation in Nigeria," *Journal of Business and Management,* 3(3), 27-31.

Dickey, A. D., and W. A. Fuller (1981), "Likelihood Ratio Statistics for Autoregressive Time Series with a Unit Root," *Econometrica,* 49(4), 1057–1072.

Dornbusch, R., F. Stenley, and R. Startz (2002), *Macroeconomics*. Eight Edition, Tata Mc Graw-Hill, West Patel Nagar, New Delhi.

Holden, S., and V. Sparrman (2013), "Do Government Purchases Affect Unemployment?" http://folk.uio.no/sholden/wp/fiscal-U.pdf (Accessed August 28, 2013).

International Monetary Fund (2010), "Will it Hurt? Macroeconomic Effects of Fiscal Consolidation," *In IMF 2010 World Economic Outlook,* 93-124 http://www.imf.org/external/pubs/ft/weo/2010/02/pdf/c3.pdf (accessed September 2, 2013).

Lin, Y. J., Z. Juzhong, T. Min, and T. Lin (2008), "Inclusive Growth toward a Harmonious Society in the People's Republic of China: An Overview," *Asia Development Review*, 25(1&2), 1-14.

Mahadeva, L., and P. Robinson (2004), "Unit Root Testing to Help Model Building," *Handbook in Central Banking*, Issued by the Central Banking Studies, Bank of England, London EC2R 8AH. No. 22. Available at http://www.bankofengland.co.uk/education/Documents/CCBS/handbooks/pdf/ccbshb22.pdf (accessed September 3, 2013).

Mehmood, R., and S. Sadiq (2010), "The Relationship between Government Expenditure and Poverty: A Co-Integration Analysis," *Romanian Journal of Fiscal Policy,* 1(1), 29-37.

Monacelli, T., R. Perotti, and A. Trigari (2010), "Unemployment Fiscal Multipliers." *National Bureau of Economic Research,* Working Paper, no. 15931. http://www.nber.org/papers/w15931.pdf?new_window=1 (Accessed August 28, 2013).

National Bureau of Statistics (NBS) (2010), *Statistical Bulletin*, 2009. http://www.nigerianstat.gov.ng/ (accessed August 5, 2013).

Nazar, D., and M. H. Tabar (2013), "Government Expenditures and its Impact on Poverty Reduction (Empirical From Sistan and Baluchestan Province of Iran)," *International Journal of Academic Research in Economics and Management Science*, 2(1), 251-260.

Nwosa, P. I., O. O. Adediyi, and A. O. Adedeji (2013), "An Analysis of the Relationship between Public Spending and Private Investments in Nigeria," *Journal of Economics and Finance*, 1(2), 78 – 91.

Obiwuru, C. T., I. D. Nworgi, T. A. Okwu, and L. O. Nworji (2012), "Effects of Public Expenditure on Economic Growth in Nigeria: A Disaggregated Time Series Analysis," *International Journal of Management Sciences and Business Research,* 1(7), 1-15.

Okpi, A. (2012), "66 Million Nigerians Lack Access to Portable Water – WHO/UNICEF," *Punch Newspaper*, April 28, 2012.

Okulegu, B. E. (2013), "Government Spending and Poverty Reduction in Nigeria's Economic Growth," *International Journal of Social Sciences and Humanities Reviews*, 4(1), 103 – 115.

Olofin, O. P. (2012), "Defense Spending and Poverty Reduction in Nigeria," *American Journal of Economics,* 2(6), 122-127.

Onakoya, A. B., and R. C. Somoye (2013), "The Impact of Public Capital Expenditure and Economic Growth in Nigeria," *Global Journal of Economics and Finance*, 2(1), 1-11.

Taiwo, A. S., and K. K. Agbatogun (2011), "Government expenditure In Nigeria: A Sine Qua Non for Economic Growth and Development," *Journal of Research in National Development* (JORIND), 9(2), 155-162.

Uma, E. K., E. F. Eboh, and I. D. Nwaka (2013), "Government Expenditure in Nigeria: Effect on Economic Development," *American Journal of Social Issues and Humanities*, 3(3), 119-131.

World Bank (2012), *World Development Indicators, 2012* Washington, D.C.: World Bank. http://data.worldbank.org/news/world-development-indicators-2012 (Accessed August 28, 2013)