IMPACT OF PUBLIC EXPENDITURE ON NIGERIA ECONOMY

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Abstract

This study investigated the effect of public expenditure on Nigerian economy for the period of thirty years, from 1990-2019. Ex-post facto research design was adopted. The data used in this study were secondary data derived from the Central Bank of Nigeria Statistical Bulletin Annual Reports and Accounts. The study used regression analysis and the result revealed that both economic service and social service expenditure have positive significant effect on Nigeria economy (RGDP). The study concluded that economic service and social service expenditures have effects on Nigerian economic growth. The study recommended that the government should increase public spending on social services. This can be accomplished by utilizing public funding to improve educational quality at all levels of learning (primary, secondary, and higher education) through training programs that give the skills and information needed to increase labor productivity and create additional job possibilities. Furthermore, public spending in the health and social security sectors should be directed toward constructive expenditures that promote economic growth.

Keywords: *Public Expenditure, Employment, Poverty, Economic Stability, Economic Growth.*

Introduction

The goal of every economy is to maintain a high level of employment, stabilize prices, promote rapid growth of gross national product, maintain a favourable balance of payments position, promote a free market economy, satisfy collective demands, redistribute income equitably, promote infant industries, the encourage the priority sector, encourage balance population development and promote labour and capital development These explain why the expenditure of governments the world over has maintained a consistent upward trend. This continuous increase in the volume of government expenditure is targeted at expanding the functions of government through the direct investment in industrial innovations, public health, education, commercial activities, etc with a view to achieving growth. According to Arrow and Kurz (2000), public expenditure is assumed to be the most powerful economic factor of all modern societies. The form and pattern of the output growth of any economy is determined by the structure and size of its public expenditure.

The Nigerian public expenditure structure can be segmented into recurrent expenditure and capital expenditure. The components of the recurrent expenditure include expenditure on administration. (interest on loans and maintenance, salaries and wages) while capital expenditure captures government projects on the generation of the electricity, education, telecommunication, airports, roads, and so on. The provision of public infrastructural facilities has been one of the fundamental bases for public spending. Providing and maintaining these infrastructural amenities cost a huge amount financing. Hence, investment on infrastructures and productive activities spending is expected to positively contribute to the growth of the economy whereas spending on consumption by the government retard growth. It is argued that the country will benefit socially and economically from government investment (spending) o health, roads, education, agriculture, etc.

Among the world of scholars, the issue of impact of public expenditure on the growth of the economy has sponsored continuous debate.

Governments have been found to be involved in two basic functions, that is, the protection functions (security) and the provision function. Government protection functions include the establishment of the rule of law and property rights enforcement. With thin function, the security of lives and properties are offered, the criminality risk is minimized, and the country is secured from external aggression. The provision functions centres on the provision of public goods and services to include power, road, health and education. For instance, the expenditure of government on education and health engenders labour productivity and increases national output growth. Similarly, infrastructural expenditure on power, roads, communication, etc reduces the costs of production, facilitates the development of the private sector and industrial profitability, hence, fostering the growth of the economy (Nurudeen & Usman, 2010). The enormous effects of public expenditure on economic growth have continued to attract attention of the economists recently.

However, public expenditure allocation without due consideration to the rising needs of the economy is bound to bring about huge distortions in the economy which may retard growth. Government has concerned since the 1960 to allocate public expenditure continuously into the different economic sector in the economy. According to Olabisi and Funlayo (2012), the basic determinant for this allocation has been by political consideration instead of concise economic considerations.

Ordinarily, public expenditure lends to the reduction in poverty level, standard of living improvement for the citizens, equality in the distribution of income, the overall wellbeing improvement and the growth of the economy. Government engages a number of policy measures as economic interventions which include market failure bailout or social equity improvement via

resources redistribution. And the only government can embark on these intervention measures successfully is through expenditure. Often, expenditure most time is more advantageous than various policy measures like loans and guarantees, regulations and tax expenditure. Particularly, expend time of government appears to be somewhat transparent, making the government accountable to the country over their decision. For instance, the sustainability, distribution and burden of regulation can be easily determined due to the difficulty in measuring the economic effects.

Expenditure as an expression of gross domestic product (GDP) is regarded as the measure of the direct involvement of government in the entire economic activity. Expressing expenditure as a proportion of GDP is beneficial in two days at least. Firstly, it made available the basis for comparing spending analysis overtime. Expenditure as a proportion of GDP unlike the nominal dollars provides the basis of comparing meaningfully, the relative use of resources between years. Finally, it further revealed relatively, the degree/extent of the intervention by government in the economy and also aid in social choice analysis (Akpan, 2005).

It is against this background that this study examines the effect of public expenditure on Nigerian economy.

Literature Review

Public Expenditure:

Public expenditure deals with government spending and the level of liquidity in the economy in order to achieve some stated objectives (Sharp & Slinger 1970). Public expenditure is concerned with the utilization by the government of the nation's resources with regards to the rules, regulations and policies that shape the planning, budgeting, forecasting, coordinating, directing, influencing and governing the inflow and outflow of funds in order to maximize the objective of

the institution (Obilonu, 2011). Okoro (2015) defines public expenditure as the value of goods and services provided through the public sector. Public expenditure according to Nwaeze, Njoku and Nwaeze (2014) is the expense of the government for its own maintenance, for the benefits of the society, the economy, external bodies and for other countries. According to Njoku (2005), public expenditure refers to government spending on revenues derived from taxes and other sources. Therefore, this study sees government expenditure as all Federal Government expenses on administration, economic service, social service, transfers, productive and protective which can be financed through government generated fund through taxes. However, this study concentrated on public expenditure on productive.

Nigeria Economy: This study sees Nigerian economy from five perspective of economy which projects the well being of any nation. They are employment, poverty, economic growth, economic distribution, economic stability.

Employment: In order to provide enough employment opportunities to offset the rise in the labour force entering the labour market, employment is one of the most crucial factors in the attempt to improve the nation's economy. A community's ability to engage in economic activities that generate revenue for them to meet their own needs and the needs of their families can be facilitated by the expansion of work opportunities. The opportunity for collaboration is equivalents to the number of job opening that exist in the working environment since employment opportunities can also be seen as a demand for labour in the labour market (demand for labour force). Of course, there will be more employment chances the more development activities there are. However, economic growth can affect employment from the demand side (creating jobs) and the supply side (improving the quality of work), which means that theoretically it plays an important role to increase employment opportunities (Todaro, 2000).

Economic Stability: Every government aims for financial stability. Stable economies make planning simpler, lessen public unhappiness, and give an excuse for holding onto power. This still holds true for all levels of government, from the federal to the municipal. But seeking to preserve stability frequently leads to high inflation rates (Glyfason, 1999). As a result, for the economy to remain stable as long as inflation keeps rising, it must expand. As a result, economic stability and expansion are frequently mutually exclusive. This is reinforced by a wealth of literature that links economic growth and economic stability, as well as by political rhetoric.

When real GDP does not increase steadily, economic swings take place. Real GDP declines during recessions, which are characterised by times of high unemployment and low income. These shifts in output and employment are frequently viewed as a normal component of the business cycle. With regard to economic stability, there are two schools of thoughts.

Some economists believe that the economy is prone to instability. They contend that the "economy experiences frequent shocks to demand and supply...and that these shocks will cause fluctuations in output, unemployment, and inflation unless policymakers use monetary and fiscal policy to stabilise the economy" (Mankiw, 2001). According to these economists, policy should stimulate the economy when it is weak and slow it down when it is strong. Other economists adopt a more laissez-faire stance because they believe that the economy is fundamentally stable and attribute economic swings to bad, ineffective economic policies (Mankiw, 2001). They argue that economic policy should just allow the economy to develop naturally rather than attempting to correct it.

Poverty: Poverty impacts many facets of the human situation, including the physical, moral, and psychological ones, making it difficult to come up with a succinct description that is accepted by all. Choosing where to draw the boundary between the "poor" and the "non poor" is a challenge

that never goes away. Poverty, according to a 2002 World Bank report, is the inability to meet a minimal standard of life as determined by consumption requirements. In order to illustrate the practical side of poverty, the paper created certain indicators based on a minimal level of consumption. Lack of access to resources, a lack of education and job skills, poor health, malnutrition, lack of political freedom and voice, lack of housing, inadequate access to water and sanitation, susceptibility to shocks, violence and crime, and political marginalisation and discrimination are a few of these. Similar to this, the United Nations Human Development (UNHD) introduced the use of other indices to evaluate poverty in a nation, including life expectancy, infant mortality rate, primary school enrolment ratio, and number of people per physician (UNDP, 2010).

Economic Growth: Solow (1956) defined economic growth as a term used to indicate the increase in per capita GDP or other measures of aggregate income. Casey and Oster (2009) described economic growth as an increase in the total output in an economy. From these, economic growth can be defined as increase in quantity of goods and services produced in an economy at a particular time period.

Muritala and Taiwo (2011) defined a country economic growth as a long term rise in capacity to supply increasing diverse economic goods to its population, this growth capacity based on advancing technology, the institutional and ideological adjustment that is demanded. In other words, economic growth refers to increase in a country's potential Gross Domestic Product (GDP), although this differs depending on how national product has been measured. Economic growth refers to the continuous increase in the national output or income of a country. It is the increase overtime of an economy's capacity to produce goods and services needed to improve the wellbeing of the citizen in increasing numbers and diversity. Balami (2006) described economic growth as

the increase in output of an economy capacity to produce goods and services needed to improve the welfare of the citizens of the country. Thus, the ultimate goal of economic growth is to make the people better off. Therefore, this study described economic growth as the increase in the market value of the goods and services produced by an economy over time. It is conventionally measured as a percent rate of increase in real gross domestic product (RGDP). Therefore, this study measures Nigerian economy as the real gross domestic product.

Empirical review

The study conducted by Adewara and Oloni (2012) examined the relationship between the composition of public expenditure and economic growth in Nigeria between 1960 and 2008 using the Vector Autoregressive Models (VAR). Their findings shows that expenditure on education has failed to improve economic growth due to the high rate of rent seeking in the country as well as the growing rate of unemployment. They also found that expenditure on health and agriculture contributed positively to growth.

Okafor and Kenneth (2016) examined public spending for growth – induced employment in Nigeria. The study used CBN bulletin data from 1970-2014 and used factor analysis. The result revealed that; Public spending contributed significantly to economic growth in Nigeria but did not significantly contributed to job creation in Nigeria. Also, deficit financing of recurrent expenditure was a most important single factor inhibiting public spending from inducing economic growth for employment generation.

Nwaeze (2019) used secondary data sourced from the CBN Statistical bulletin were used to experiment on the disaggregated impact of government expenditure on administration, economic services, social community services and transfers have on the rate of unemployment in Nigeria.

The Error Correction econometric model (ECM), the Johansen cointegration and the Granger causality tests were the central analytical tools used in the study. Stationary test showed that the variables were non-stationary at levels but all were stationary at first difference. In the short-run, a positive relationship was observed. The short-run coefficient of economic services and unemployment was observed to be negative and the direction of causality was from government expenditure on economic services. Expenditure on social community service observed negative and statistically and observed a weak causal influence on unemployment. This highlights the unique case of underdeveloped nature of Nigerian economy. Interestingly, government expenditure on Administration was found to be positive and statistically significant and the direction of causality was from government expenditure on administrative expenses. However, there was no causal relationship between government expenditure on transfers and unemployment. More so, Aluthge, *et al.* (2021) investigated the impact of Nigerian government expenditure (disaggregated into capital and recurrent) on economic growth using time series data for the period 1970-2019. The paper employs Autoregressive Distributed Lag (ARDL) model. To ensure robustness of results, the study accounts for structural breaks in the unit root test and the co-integration analysis. Findings revealed that capital expenditure has positive and significant impact on economic growth both in the short run and long run while recurrent expenditure does not have significant impact on economic growth both in the short run and long run.

Odior (2014) assessed the impact of government expenditure policy on education and poverty reduction in Nigeria. The specific objective of the study is to explore or simulate how government expenditure on education would help to meet the Millennium Development Goals (MDG) of the United Nations in terms of improving education service and reduce poverty in Nigeria. An integrated sequential dynamic computable general equilibrium (CGE) model was used to simulate

the potential impact of increase in government expenditure on education in Nigeria. The model is simulated with a 2004 social accounting matrix (SAM) data of the Nigerian economy. The result of experiment indicate that it will be extremely difficult for Nigeria to achieve the MDG target, in terms of education and poverty reduction by the year 2015, because this policy measure in the analysis was unable to meet this goal. The MDG target for Nigeria in terms of poverty reduction is to reduce the percentage of population living in relative poverty from 54.4% in 2004 to 21.4% by 2015. It was found that the re-allocation of government expenditure to education sector is important in determining economic growth and the reduction of poverty in Nigeria.

Okulegu (2013) investigated the link between government spending and poverty reduction in Nigeria's economic growth. This study adopted time series econometrics analysis and descriptive statistics to determine the impact of government spending on Nigerian's economic growth. This research work employed the use of multiple regression model based on Ordinary Least Square (OLS) method in other to achieve the objectives mentioned above, the variables used are Poverty Level (Dependent variable) and the explanatory variables; Agricultural Credit Guarantee Scheme Fund (ACGSF) and Government Expenditure on Agriculture (GEA). It covers the period of years 1980-2009, and the data was mainly from CBN statistical bulletin. The regression result shows that public spending has significant impact on Poverty reduction in Nigeria. It is estimated from the result that 1% increase in Agricultural Credit Guarantee Scheme Fund (AGCSF) will, on the average lead to decrease by 0.06% in Poverty Level.

Theoretical review

Wagner's theory: Wagner's law is a principle named after the German economist Adolph Wagner (1835-1917). Wagner advanced his 'law of rising public expenditures' by analyzing trends in the

growth of public expenditure and in the size of public sector. Wagner's law postulates that: (i) the extension of the functions of the states leads to an increase in public expenditure on administration and regulation of the economy; (ii) the development of modern industrial society would give rise to increasing political pressure for social progress and call for increased allowance for social consideration in the conduct of industry (iii) the rise in public expenditure will be more than proportional increase in the national income (income elastic wants) and will thus result in a relative expansion of the public sector. Musgrave and Musgrave (1988), in support of Wagner's law, opined that as progressive nations industrialize, the share of the public sector in the national economy grows continually.

Keynesian theory: Keynes regards public expenditures as an exogenous factor which can be utilized as a policy instruments promote economic growth. From the Keynesian thought, public expenditure can contribute positively to economic growth. Hence, an increase in the government consumption is likely to lead to an increase in employment, profitability and investment through multiplier effects on aggregate demand. As a result, government expenditure augments the aggregate demand, which provokes an increased output depending on expenditure multipliers.

The Solow's theory: Robert and Swan introduced the Solow's model in 1956. Their model is also known as Solow-Swan model or simply Solow model. In Solow's model, other things being equal, saving/investment and population growth rates are important determinants of economic growth. Higher saving/investment rates lead to accumulation of more capital per worker and hence more output per worker. On the other hand, high population growth has a negative effect on economic growth simply because a higher fraction of saving in economies with high population growth has to go to keep the capital-labour ratio constant. In the absence of technological change & innovation, an increase in capital per worker would not be matched by a proportional increase in

output per worker because of diminishing returns. Hence capital deepening would lower the rate of return on capital.

Methodology

This study adopts ex post facto research design to establishing causal relationships between productive expenditure, economic growth and public debt. In other words, ex post facto research design helps to find out the cause of certain occurrences or non-occurrences. The data for the study were sourced from Central Bank of Nigeria Statistical Bulletin and Debt Management Office Annual Reports. These data were collected for the periods of thirty one (30) years, covering the periods of 1990 to 2019. However, the data for this study was analysed using regression analysis. Multicollinearity and normality test were carried out. The stationarity property of the time series variables was tested using the Augmented Dickey Fuller (ADF) test statistics for unit root and avoid the problem of spurious regression since the data for the analysis is time series. Post diagnostic tests were carried out, such as Heteroskedasticity Test using Breusch-Pagan-Godfrey. The econometric model for this study as stated below to test for possible relationship between the dependent variable and independent variables. The study is guided by the following model:

$$RGDP_t = \beta_0 + \beta_1 ESEX_t + \beta_2 SSEX_t + \mu_t$$

Where;

RGDP = Real Gross Domestic Products

ESEX = Economic Service Expenditure

SSEX = Social Service Expenditure

Variable measurement

Economic Service Expenditure (independent Variable) =Economic services expenditures are government expenses on agriculture, construction, transportation and communication, and other economic services (CBN Statistical Bulletin).

Social Service Expenditure (Independent Variable) = Social and community service expenditures are government expenses on education, health and other social and community services (CBN Statistical Bulletin).

Economic Growth (dependent Variable) = Economic growth is described as the increase in the market value of the goods and services produced by an economy over time. It is conventionally measured as a percent rate of increase in real gross domestic product (RGDP) (CBN Statistical Bulletin).

4.0 Results and Discussion

Table 1: Descriptive Statistics

	RGDP	ESEX	SSEX
Mean	49584.47	189.6300	442.3526
Maximum	176075.5	562.7500	1519.020
Minimum	590.0600	1.300000	1.340000
Std. Dev.	52707.36	182.0415	477.4981
Obs	30	30	30

Source: E-view Output, 2023

Table 1 indicates the rundown of the descriptive statistics. It revealed the entirety of 30 years from 1990 - 2019. Table 1 shows the average value of Real Gross Domestic Product (RGDP) to be 49584.47 which indicates a low Real Gross Domestic Product (RGDP). The max value of RGDP is 176075.5 with mini value of 590.0600 and standard deviation of 52707.36. This implies that the data are widely dispersed from the mean value. Furthermore, Economic Service Expenditure

(ESEX) mean is 189.6300, max is 562.7500, mini of 1.300000 and standard deviation of 182.0415. It implies that the data are not widely dispersed from the mean. Also, the mean value of Social Service Expenditure (SSEX) is 442.3526, max value is 1519.020, with the mini value of 1.340000 and standard deviation of 477.4981. This indicates that the data are widely dispersed from the mean.

Table 2: Correlation Matrix

	RGDP	ESEX	SSEX	PUDT	ESEX__PUDT	SSEX_PUDT
RGDP	1.000000					
ESEX	0.853439	1.000000				
SSEX	0.986248	0.867468	1.000000			

Source: E-view Output, 2023

The correlation matrix Table 2 above shows the association values between each explanatory variable and dependent variable. Therefore, the correlation matrix result indicates that Real Gross Domestic Product (RGDP) has a positive association with ESEX, SSEX. The study revealed both positive and negative association between the variables. However, the predictor variables do not exhibit any problem of collinearity.

Table 3: Variance Inflation Factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
ESEX	122935.1	114.0912	1.143954
SSEX	1973912.	1771.197	4.146484
C	3.55E+08	3768.842	NA

Source: E-view Output, 2023

The tolerance values and the variance inflation factor are two good measures of assessing multicollinearity between the independent and dependent variables in a study. The result shows that variance inflation factor were consistently smaller than ten (10) indicating complete absence of multicollinearity (Neter, Kutner, Nachtsheim & Wasserman, 1996; Cassey *et 'al*., 1999). This shows the suitability of the study model been fit with the two independent variables. Also, the tolerance values were consistently smaller than 10.00, therefore extend the fact that there is complete absence of multicollinearity between the independent and dependent variables (Tobachmel & Fidell, 1996).

Table 4: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.296492	Prob. F(9,20)	0.2986
Obs*R-squared	11.05369	Prob. Chi-Square(9)	0.2720
Scaled explained SS	4.411019	Prob. Chi-Square(9)	0.8823

Source: E-view Output, 2023

The Breusch Pegan-Godfrey Test of Heteroskedasticity shows that the probability chi-square value of 0.2720, this implies that the data are homokesdasticity. Thus, the p-value of 0.2720 and observe R-squared of 11.05369 which is greater than 0.05 makes the study to accept the null hypothesis that the residuals are not heteroskedasticity but homokesdasticity and is desirable.

Table 5: Unit Root Test for Stationarity (Augmented Dickey Fuller)

Variables	ADF Test	Critical Value	Order of

					Integration
		1% critical value	**5% critical value**	**10% critical value**	
RGDP	-8.717689	-3.689194	-2.971853	-2.625121	2nd Diff
ESEX	-7.537460	-3.689194	-2.971853	-2.625121	2nd Diff
SSEX	-6.439010	-3.689194	-2.971853	-2.625121	2nd Diff

Source: E-view Output, 2023

The unit root test in table 6 above shows that at various levels of significance (1%, 5% and 10%), the time series were stationary. From the result RGDP, ESEX, and SSEX were integrated of second order (second difference), therefore all the time series in this study are stationary.

Table 6: Regression Analysis Result

Dependent Variable: D(RGDP,2)

Method: Least Squares

Date: 04/18/23 Time: 10:57

Sample (adjusted): 3 30

Included observations: 29 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ESEX,2)	28.99392	15.19653	1.707931	0.0589
D(SSEX,2)	15.03845	7.684888	0.158655	0.0105
C	1276.942	584.9409	2.183027	0.0395

R-squared	0.474753	Mean dependent var	741.6279
Adjusted R-squared	0.360569	S.D. dependent var	3766.916
S.E. of regression	3012.193	Akaike info criterion	19.04072
Sum squared resid	2.09E+08	Schwarz criterion	19.32360
Log likelihood	-270.0904	Hannan-Quinn criter.	19.12931
F-statistic	4.157784	Durbin-Watson stat	1.450910
Prob(F-statistic)	0.007753		

Source: E-view Output, 2023

The regression line shows that RGDP =28.99392 + 15.03845 + 1276.942

The F-Statistic of 4.157784 and its corresponding P-value of 0.007753 indicates that the model is fit and the independent variables are properly selected, combined and used. The Coefficient of Determination (R^2) of 0.474753 indicates that about 47% of variation in RGDP can be explained by ESEX, and SSEX, or the ability of the regression line to predict RGDP is about 47%. Furthermore, the study accepts the alternate hypothesis which states that, economic service expenditure and social service expenditure have significant effect on economic growth in Nigeria.

Test of Hypotheses

The regression analysis result shows that the real gross domestic product (RGDP) will increase by 28.99392 units for every unit increase in economic service expenditure (ESEX). The significant value or P-value of ESEX is 0.0589, this significant value or P-value is less than the t-value of 0.05, which indicates that ESEX has positive significant effect on economic growth (RGDP) in Nigeria.

Also, the regression line indicates that RGDP will increase by 15.038845 units for every unit increase in social service expenditure. The significant value of SSEX is 0.0105, this value is less than the t-value of 0.05, and likewise, the coefficient value of SSEX is positive which indicates that SSEX has positive significant effect on RGDP in Nigeria. Therefore, the study rejects the null hypothesis.

5.0 Conclusion

This study discussed how economic service expenditure has influence on economic growth of Nigeria. It is clear that any increase in government spending on economic service will lead to improve economic growth and as well improve livelihood of citizens positively. Furthermore, increased government expenditure induces an increase in the flow of money in the economy and the private sector increases its production capacity. But, when moderated, economic growth was affected positively. This indicates that when borrowed fund has been used for the aim for which the fund was borrowed, it will definitely improve economic growth.

Government expenditure on social service affects economic growth positively. This indicates that increase social service expenditure will create more avenues for better economic growth. Meanwhile, when moderated by public debt, economic growth is been influenced positively. Therefore, this implies that public debt when used for the appropriate reason the fund has borrowed for will influence economic growth.

Recommendations

The study offers the following recommendations based on the conclusion of this study:

i. The government should stabilize spending and pursue productive spending on economic services (agriculture, construction, transportation, and communication, among other economic services expenditures that improve economic growth); additionally, it is not how much money is spent, but how well it is spent, that will address Nigeria's crisis.

ii. To sustain vigorous economic growth, the government should increase public spending on social services. This can be accomplished by utilizing public funding to improve educational quality at all levels of learning (primary, secondary, and higher education)

through training programs that give the skills and information needed to increase labor productivity and create additional job possibilities. Public spending in the health and social security sectors should be directed toward constructive expenditures that promote economic growth. Social security spending should be directed toward reducing economic disparity and poverty.

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