

# Government Expenditure and Economic Growth in Nigeria (1992-2016)

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## Abstract

The study investigates the effect of public expenditure in health on economic growth in Nigeria from 1992 to 2016. The objective of the study is to determine the effect of public expenditure on economic growth in Nigeria using Vector Error Correction Model (VECM). The study used *ex post facto* research design using time series econometric technique to examine the long and short run effects of public expenditure on economic growth in Nigeria. Results obtained showed that government expenditure in health is highly and statistically significant and equally have positive relationship on economic growth in Nigeria. It was therefore concluded that expenditure on health drives economic growth. The study recommends that government should invest more in capital expenditure to raise the level of economic goal in Nigeria.

**Keywords:** Recurrent expenditure, Capital expenditure, Health sector and Economic growth

## 1.0 Introduction

Public expenditure is assumed to be the most powerful economic factor for all modern societies. The form and pattern of the output growth of any economy is determined by the structure and size of its expenditure (Owui, Asukwo, Olugbemi, Nkamare and Emefile, 2020).

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. Within the 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 centered 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).

Expenditure patterns of government usually are categorized into recurrent and capital expenditure, according to the flowchart of government block (Mordi, 2010). The former corresponds to government's purchase of current

goods and services (labour, consumables, wages and salaries, etc), while the latter would ideally include not merely investments in infrastructures (roads, schools, hospitals etc) but also all other expenditures that might contribute to development. In other words, while the recurrent expenditure refers to financial outlays necessary for the day to day running of government businesses, the capital expenditure refers to investment outlets that increase the assets of the state. These categorization, however, were not mutually exclusive but were indeed inter-linked. For instance, while capital expenditure gave rise to recurrent expenditure in most cases through the operational and maintenance costs of completed capital projects, the amount available for investment was a function of not only the size of revenue but also the amount that goes annually into the running of government (Agbonkhese & Asekone, 2014)

In a developing country like Nigeria, government has a key function in promoting growth and expenditure should be channeled towards this objective. Thus, it is important to continually carry out study so as to identify the efficacies of government expenditure in relation to revenue generated on economic growth.

In Nigeria, government expenditure has continued to rise due to the huge receipts from production and sales of crude oil, and the increased demand for public (utilities) goods like roads, communication, power, education, and health (Olulum, Erhieyovwe & Andrew, 2014). However, some schools argued that increase in government expenditures do not promote economic growth; rather, it slows down the overall performance of the economy. The question which arises therefore is what has led to disproportionate or mismatched between government expenditure and economic growth in Nigeria? What created the gap between economic growth and government expenditure?

Basically, to achieve a sustainable level of development, it is expected that the government participate in the provision of some basic public infrastructures that are fundamental to the economy. These public infrastructures include roads, bridges, security, health, water, electricity, school and so on. The large quantum of fund injected into the economy by the Nigerian government to finance the recurrent and capital expenditure has therefore led to increase in aggregate money supply without the corresponding stability of the macroeconomics variables (employment /unemployment rate, interest rate, balance of payment, consumer price index, gross domestic product and so on (Monogbe, Achugbu, & Davies, 2016).

However, many literature on government / public expenditure are of the opinion that government expenditure has been increasing over the years as a result of the increase in revenue from crude oil until lately when the crude oil price slashed down, yet the increase in government expenditure did not translate to economic growth that could have positive impact in all areas of Nigerians economic and social life (Okere, Uzowuru & Amako, 2019). Despite the rising public expenditure over the years, the Nigerian economy is still described as under developed. We are therefore interested in investigating if the rising public expenditure has impacted positively on the growth of Nigerian economy.

## **2.0 Literature Review**

### **2.1 Conceptual Framework**

#### **2.1.1 Concept of Public Expenditure**

According to Abdullah (2010), 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. Government spending has formed a point of debate for achieving economic growth in public economics. This is important for developing countries like Nigeria, most of which have experienced increasing level of public expenditure over time. In general, it is believed that Nigerian economic policies have had a big influence on the trend of government expenditures for economic growth. However, the reality in Nigeria leads the policy makers to become divided as whether the expansion of government expenditure promotes or impedes economic growth.

Public expenditure structure in any country can be divided into two namely; recurrent expenditure and capital expenditure. The components of the recurrent expenditure include expenditure on administration i.e. 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 [ Abu and Abdullahi, 2010]. According to the Central Bank of Nigeria (CBN) as cited by Okere, Nzowuru and Amako [2019], government expenditure is classified into four (4) functions.

- i) Administration: this includes all government expenditure on defense, general administration, internal security and national assembly.
- ii) Social and Community Services: this includes all government expenditure on education, health and other social and community services.
- iii) Economic Services: it includes government expenditure on agriculture, construction, transportation and communication and other economic services.
- iv) Transfers: this includes all government expenditure on public debt servicing, pension and gratuities, contingencies/subventions and other CFR charges.

#### **2.1.2 Concept of Growth**

Jhingan (2007) defines economic growth as the quantitative sustained increased in a country's per capital output or income which is accompanied by increase in labor force, consumption and volume of trade. On the other hand, Todaro and Smith (2011) define economic growth as the increase in the market value of goods and services produce by economy over time. It is conventionally measured as the percentage of increase in Real Gross Domestic Product (GDP). For the purpose of this study, Todaro and Smith's definition of economic growth as the increase in the market value of goods and services produce by economy over time is adopted.

Theoreticians considered economic development as a process that generates economic and social, quantitative and particularly, qualitative changes, which causes the economy to cumulatively and durably increase its real nominal product. Economic growth could therefore be seen as the process of measuring the size of national economics, the macro-economic indications, especially the GDP per capita, in an ascendant but not necessarily linear direction, with positive effects on the economic-social sector, while development shows how growth impacts on the society by increasing the standard of life (Solow, 1956)

## **2.2 Theoretical Framework**

### **2.2.1 Musgrave Theory of Public Expenditure Growth**

This theory was propounded by Musgrave as he found changes in the income elasticity of demand for public services in three ranges of per capita income. He posits that at low levels of per capita income, demand for public services tends to be very low, this is so because according to him such income is devoted to satisfying primary needs and that when per capita income starts to rise above these levels of low income, the demand for services supplied by the public sector such as health, education and transport starts to rise, thereby forcing government to increase expenditure on them. He observes that at the high levels of per capita income, typical of developed economics, the rate of public sector growth tends to fall as the more basic wants are being satisfied.

### **2.2.2 The Wagner's Law/Theory of Increasing State Activities**

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 .

### **2.2.3 The Keynesian Theory**

Of all economists who discussed the relation between public expenditures and economic growth, Keynes was among the most noted with his apparently contrasting viewpoint on this relation. 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.

### **2.2.4 The Endogenous Growth Theory**

The basic improvement of endogenous growth theory over the previous models is that it explicitly tries to model technology (that is looks into the determinants of technology) rather than assuming it to be exogenous. Mostly, economic growth comes from technological progress, which is essentially the ability of an economic organization to utilize its productive resources more effectively over time. Much of this ability comes from the process of learning to operate newly created production facilities in a more productive way or more generally from learning to cope with rapid changes in the structure of production which industrial progress must imply (Solow, 1956).

### 2.3 Empirical Review

Yusuf, Babalola, Aninkan and Salako (2015) study empirically investigated the impact of government expenditures on adjudged critical sectors on economic growth in Nigeria (1984-2013). The study employs quantitative analysis by the use of Auto-Regression Distributed Lag Model. The study reveals that government expenditure on defence retards the economic growth and government expenditure on agriculture promotes the economic growth while government expenditure on education and transport / communication have no impact on economic growth in the long run. In the short run, none of the government expenditure on these sectors contributes to the growth objective.

Also, Abutu and Agbede (2015) examined relationship between government expenditure and economic growth in Nigeria using a co-integration and error correction model for the period 1970-2010. It was found out that a positive and significant linear relationship between the two categories (capital and recurrent) of government expenditure and economic growth in the long run, while economic growth had a positive and significant linear relationship with recurrent expenditure and negative but significant relationship with capital expenditure in the short run.

Bonmwa and Ishmael (2017) empirically assessed the impact of government expenditure on the growth of Nigeria economy and found that social and economic services had negative and insignificant effect on economic growth while administration had positive and significant effect.

Onifade, Savas, Asongu and Bekun (2020) used Pearsan's ARDL approach to investigate the impact of public expenditures on economic growth in Nigeria for the period 1981-2017. The study found out that recurrent expenditures had significant negative effect, while capital expenditure had positive but insignificant effect on economic growth in Nigeria.

### 3.0 Methodology

In this study, *ex - post facto* research design was used.

#### 3.1 Sources of Data Collection

Secondary source of data collection was adopted in this study. The data used were obtained from Central Bank of Nigeria (CBN) statistical Bulletin from 1992 to 2016.

#### 3.2 Model Specification

To examine the effect of public expenditure in health (HLT) on economic growth in Nigeria, we adopt Vector Error Correction Model (VECM) approach. Armorer (1996), found VECM to be a good tool for government spending and economic forecasting model. The model estimates that:

$$Y_t = \beta_0 + \beta_1 X_t + \mu$$

Where:

$Y_t$  = Is the real gross domestic product (RGDP)

$\beta_0$  = is the intercept term

$\beta_1$  = is the regression coefficient

$X_t$  = is a set of baseline explanatory variables

$\mu$  = is the error term

Above model was modified and estimated below:

RGDP = Government expenditure in health (HLT)

$$Y_t = \beta_0 + \beta_1 X_t + \mu$$

Where:

$Y_t$  = Dependent variable RGDP

$X$  = Government expenditure in health (HLT)

$t$  = Time Series

$\beta_0$  = Constant or intercept of Y axis

$\beta_1$  = Regression co-efficient

$\mu$  = Error term

$$RGDP_t = \beta_0 + \beta_1 HLT + \mu$$

#### 4.0 Data Analysis

The general aim of this study is to establish the effect of total government expenditure in health on Gross Domestic Product (GDP). In the model structured above, the variables used are annual time series from 1992 to 2016. Therefore, the empirical data associated with this regression results is stated below:

$$GDP = F(HLT)$$

GDP - Gross Domestic Product

HLT - expenditure on health

Table One: Regression of Log (GDP) on Log (HLT)

Dependent Variable: Log (GDP)

Method : Least Square

Sample : 1992 to 2016

No of observations : 25

Variable	Coefficient	Standard error	T-statistic	Prob
C	9.665265	0.438436	22.04432	0.0000
Log(HLT)	0.300511	0.046631	6.444116	0.0000

$$R^2=0.661374$$

Source: E-view statistical package

#### 4.1 Analysis

The equation in the model regressed Log (GDP) on Log (HLT), the coefficient of the constant term is 9.665265. The sign borne by the regression coefficient of the constant is positive. This means that by holding independent variable, the GDP increases. The regression coefficient of Log (HLT) is significant as confirmed by the t probability (0.0000). It is estimated from the result that 1% increase in Log (HLT), on the average, will lead to 0.30% increase in Log (GDP). The computed value of  $R^2 = 0.564784$  shows that 56.48 % of the total variation in gross domestic product (GDP) is accounted for by the explanatory variable (HLT), while 43.52 % of the total variation in GDP is attributable to influence of other variables which are not included in the regression model. This means that the regression coefficient of Log (HLT) is 6.444116 and its P-value (0.0000). Since the P-value (0.0000) < 0.05 (5 %) level of significance, we reject the null hypothesis and conclude that the level of total expenditure on health (HLT) has significantly affected the economic growth of Nigeria. The result of this study is in agreement with the study carried out by Abu and Abdullahi (2010) and in contrast to the study carried out by Olulu, Erhieyovwe and Andrew (2014).

## 5.0 Conclusion and Recommendations

### 5.1 Conclusion

From the result of this study, it can be concluded that expenditure in health (HLT) drives economic growth in Nigeria.

### 5.2 Recommendations

Based on the result obtained from this study, we recommend the following:

1. Government should invest more in capital expenditure to raise the level of economic growth in Nigeria.
2. Government should have more expenditure on key macro economic variables in order to transform effective and efficient growth of the Nigerian economy.
3. Capital and recurrent expenditures should be properly managed to raise Nigeria's production capacity.

4. Effort should be made by government at all levels i.e. local, states and federal to reduce or eliminate strike action by workers as strike by workers reduces productivity which in turn reduces the level of economic growth
5. Effort should also be made by government to stop corruption especially in the civil service as this has negative impact on economic growth of the nation.

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