

Economic Effect of Government Expenditure on the Growth of the Nigerian Economy

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Abstract

The study determined the economic effect of government expenditure on the growth of the Nigerian economy (1999-2022). Specifically, the study examined the effect of government capital expenditure and government recurrent expenditure on real gross domestic product (RGDP) of Nigeria. Ex-post facto research design was deployed in the study. Secondary data on the variables of the study were sourced from Central bank of Nigeria Statistical Bulletin (2022). Descriptive statistical analytical tools such as mean, standard deviation, minimum and maximum values were used to summarise the data while Ordinary Least Square regression was used to test the hypotheses at 5% level of significance. The findings of the study revealed the following: government capital expenditure has a positive and significant effect on real gross domestic product of Nigeria ($p < 0.05$); government recurrent expenditure has a positive and significant effect on real gross domestic product of Nigeria ($p < 0.05$). The study recommends that Nigerian government should increase investment in critical infrastructure projects, such as transportation networks, energy systems, and telecommunications, to stimulate economic growth and enhance competitiveness and prioritize the allocation of funds to projects that have the potential to generate significant long-term benefits for the economy.

Keywords: *Government Expenditure, Economic Growth, Government Capital Expenditure, Government Recurrent Expenditure, Real Gross Domestic Product*

1.0 Introduction

1.1 Background to the Study

The Nigerian economy, like many developing countries, has experienced uneven and often sluggish economic growth over the past several decades. One of the key factors influencing this growth is government expenditure. The relationship between government expenditure and economic growth is a complex and contested issue in economics because when government invests in capital projects such as provision of infrastructures as well as major repairs, restructuring and overhauling of the existing ones to match with the present needs of the citizens, it is termed government capital expenditure (Omodero, 2020). Such public category of public expenditure is vital for sustainable economic development of any nation (Bendahmane & Chenini, 2021). On the other hand, recurrent government expenditures which comprise payments other than for capital projects are also vital in terms of drivers of sustainable economic development (Frank & Kereotu, 2020). Some theories argue that government spending can be an important driver of growth, while others suggest that excessive government spending can have a negative impact on economic growth (Pehlivan, Ayşegül & Konat, 2021). This highlights the need for a deeper understanding of the relationship between government expenditure and economic growth in Nigeria. While there are arguments that a positive correlation exists between government expenditure and economic growth, other arguments support no significant relationship (Idris & Baker, 2017).

The neoclassical economists have postulated that an increase in government expenditure often increases economic growth outcomes as a result of the full employment assumptions (Ojarikre & Ezie, 2015). According to Olubokun, Ayooluwade and Olumide (2016), government expenditure has continued to rise in Nigeria as a result of the huge receipts from production and sales of crude oil, and demand for public goods such as electricity, roads, communication, education and health. It is quite unfortunate therefore that even amidst this rising government expenditure, there is yet to be a meaningful growth and development, as inflationary rate within the Nigerian economic system kept increasing.

The primary duties of government entail protection (and security) and provision of certain public goods. In matters of the protection function, the government is expected to create rule of law and enforce property rights in order to minimize risks of criminality, protect life and properties and the nation from external attacks (George & Ekpenyong, 2020). The provision of public goods consists of roads construction, healthcare provision, defense, education etc. Government expenditure in Nigeria is aimed at raising aggregate demand which contribute to the growth in economy. In addition to this, successive governments in Nigeria have incurred numerous capital and recurrent expenditure on productive and growth-enhancing projects, and this enhance the productivity of the economy (Aluthge, Jibir & Abdu, 2021).

The use of government spending as a tool of economic policy is particularly crucial in promoting economic growth, which is the primary objective of most economic policies (Idris & Baker, 2017). When the government increases its spending, it creates demand for goods and services, which in turn, stimulates the economy. This increase in demand leads to higher production levels and employment rates, which contribute to economic growth. Additionally, government spending can also play a critical role in reducing unemployment. By investing in infrastructure projects, creating job training programs, and providing incentives to businesses to hire more workers, the government can help to create jobs and lower unemployment rate.

This is especially important in developing countries where unemployment is often a major concern. Another key objective of government spending is redistributing income, which is important for reducing poverty and promoting equality (Tenai, 2020). By providing social safety net programs, such as food assistance, housing subsidies, and healthcare benefits, the government can help to distribute income more equally and provide support to those who need it most.

While there is considerable debate about the effectiveness of government spending as a tool of economic policy, it is widely accepted that it plays a crucial role in maintaining economic stability (Idris & Baker, 2017). This is particularly true in developing countries where monetary policy alone is not enough to achieve the desired economic objectives. The relationship between government expenditure and economic growth has been the subject of numerous theoretical and applied studies, and there are various perspectives on the relationship. Some argue that increased government spending leads to higher economic growth, while others argue that it can have a negative impact if not carefully managed (Lingxiao, Peculea & Xu, 2016).

There are a number of empirical claims that increasing government expenditure on socio-economic and physical infrastructures will certainly encourage economic growth like the Keynesians (George & Ekpenyong, 2020). However, others such as the classical economists strongly disagree with this postulation. Be that as it may, it is quite expedient that government spends in order to ensure stability of the economy, stimulate productivity or investment (Tenai, 2020). However, the mismatch between the Nigerian economic development and huge rise in government capital and recurrent expenditure over the years continues to give a cause for enquiry especially on the part of economic growth advancement and development (Omodero, 2020). The Nigerian government has often been faced with the challenge of raising additional funds and pursuit for more tax revenues to cope with increasing government spending. It is against this backdrop that the present study examines the impact of government expenditure on economic growth in Nigeria. Real GDP was used as proxy for economic growth while government expenditure is measured by capital expenditure and recurrent expenditure.

1.2 Statement of Problem

In Nigeria, government spending has been a major policy tool for promoting economic development and reducing poverty. However, despite increased government expenditure in recent years, the Nigerian economy has faced persistent challenges including low levels of economic growth, high levels of poverty and unemployment, and rising public debt. Thus, the rise in government expenditure has not translated to substantial development, as Nigeria remains among the poorest countries in the world (Olowofeso, Ankoma, Zirra, Falade & Nsonwu, 2020). For Nigeria, World Poverty Clock said 70 million people are living in extreme poverty, representing 33 percent of Nigeria's over 200 million people (Okon, 2022).

Consequently, it continues to be a source of worry that some government officials sometimes increase government capital and recurrent expenditure and investment in unproductive projects or in goods that the private sector can produce more efficiently. As this is done, such resource misallocation contribute to the stagnation in the national output growth. However, government expenditure is a key component that enables a country allocate and spend budgetary resources to achieve a robust economic performance (Muguro, 2017). Government spending in Nigeria has been increasing faster than revenue, resulting in persistent unsustainable fiscal deficits and

a decline in the country's real GDP. This research aims to investigate the impact of government expenditure on the economic growth of Nigeria.

1.3 Objective of the Study

The broad objective of the study is to ascertain the economic effect of government expenditure on the growth of the Nigerian economy. The specific objectives are:

1. To examine the effect of government capital expenditure on the real gross domestic product of Nigeria.
2. To ascertain the effect of government recurrent expenditure on the real gross domestic product of Nigeria.

1.4 Research Questions

1. To what degree does government capital expenditure affect the real gross domestic product of Nigeria?
2. To what extent has government recurrent expenditure affected the real gross domestic product of Nigeria?

1.5 Research Hypotheses

1) H₀: Government capital expenditure has no significant effect on the real gross domestic product of Nigeria.

2) H₀: Government recurrent expenditure has no significant effect on the real gross domestic product of Nigeria.

2.0 Review of Related Literature

2.1 Conceptual Review

2.1.1 Government Capital Expenditure

Government capital expenditure is a cost incurred when government invests in capital projects such as provision of infrastructures as well as major repairs, restructuring and overhauling of the existing ones to match with the present needs of the citizens. Capital expenditure are funds that are allocated to viable and relevant projects which can generate employment, make some profit to repay the capital source. Capital expenditure includes expenditures on capital goods such as roads, railways and communication systems. The expenditures in this category directly and indirectly contribute to economic growth as they help to stimulate increased investment by the private sector (Muguro, 2017). Government capital expenditures are funds utilized by the government to supply public goods and services and to manage public debts.

Government expenditures refer to expenses incurred by the government of a country over the collective needs of the country. Government expenditure refers to any form of spending by the public sector or the government which includes both purchase of final goods and services, or gross domestic products and transfer payments (Olowofeso, Ankoma, Zirra, Falade & Nsonwu, 2020). Government expenditure is a term that is often used to describe money which a government spends. Expenditure occurs at every level of government, from the grassroots to the federal level. The government incurs some expenses while carrying out certain functions which include: defense, infrastructure, education, public health and safety, transportation, legal and judicial system, etc.

Government expenditure are the expenses which a government incurs for (i) its own maintenance (ii) the society and the economy, and (iii) helping other countries (Ojarikre & Ezie, 2015). The expenditure can be either recurrent or capital in nature. Government capital and recurrent expenditure are an important instrument utilised in the process of development. They both play a pivotal role in the functioning of any economy at almost all stages of growth and development (Aluthge, Jibir & Abdu, 2021). Most developing and developed economies today use government expenditure to improve income distribution, direct the allocation of resources in desired areas, and influence the composition of national income. In developing economies particularly, the changes in government expenditure pattern is not only projected to guarantee economic stabilization but also to spur economic growth and expand employment opportunities.

2.1.2 Government Recurrent Expenditure

Government recurrent expenditures which comprise payments other than for capital projects, including on goods and services, (wages and salaries, employer contributions), interest payments, subsidies and transfers. Recurrent expenditure are essentially routine expenses which are used for day to day administrative purposes of the country (Omodero, 2020). Such expenditure which include: salaries and allowances paid to staff, operational costs in form of travelling and accommodation, telephone, electricity and water bills, bank charges and other services (Controller of Budget, 2015). Recurrent expenditure are usual and continuous cost of running the government machinery (Olowofeso, Ankoma, Zirra, Falade & Nsonwu, 2020). As per Muguro (2017), recurrent expenditure encompasses general spending on wages and salaries, public debt repayment, and welfare services. Such expenditures can impact individuals' inclination and capacity to invest, work, and save.

2.1.3 Economic Growth

Economic growth denotes the ability to generate a wide array of economic goods and services for the populace, accomplished through technological advancements and essential institutional and ideological adaptations (Bendahmane & Chenini, 2021). This definition implies that economic growth is equivalent to a sustained increase in national output, the provision of a wide range of economic goods and services, technological advancement, and institutional, attitudinal, and ideological adjustments.

Simply put, economic growth refers to the increase over time of a country's capacity to produce goods and services that enhance the well-being of its citizens in terms of both quantity and diversity. Economic growth entails an expansion in the potential level of real output that an economy can generate within a specified timeframe, typically a year, relative to another period. Thus, it is intricately linked with Gross Domestic Product (GDP) and Gross National Income (GNI). Economies can be categorized as either performing well or underperforming, with the latter unable to exceed its production capacity. When demand for essential goods and services surpasses supply, it signals an underproduction scenario, significantly undermining the economy and its capacity to repay debts (Aluthge, Jibir & Abdu, 2021).

A robust economic performance of an economy is evidenced by its sustained long-term expansion in physical output (Bendahmane & Chenini, 2021). In times of economic prosperity, the populace enjoys an enhanced standard of living, elevated real incomes, and increased government capacity to allocate resources towards infrastructure development, such as

healthcare and education. Consequently, factors like capital accumulation and external influences such as population shifts and technological advancements play pivotal roles in driving economic growth. The metric for economic growth is determined by the extent of the rise in the quantity of goods and services produced per capita over a given period. It represents an economy's enhanced capability to produce goods and services compared to a prior timeframe. Traditionally, economic growth is gauged by the percentage rate of growth in Gross Domestic Product.

2.1.3.1 Real Gross Domestic Product

Real Gross Domestic Product (RGDP) represents the aggregate market value of goods and services produced within a nation's economy over a specific timeframe, adjusted for inflation (Pehlivan, Ayşegül & Konat, 2021). Widely utilized as a macroeconomic gauge, RGDP serves to quantify a country's overall economic activity, with its growth rate serving as an indicator of the economic cycle, thus making it a primary measure of output and economic vitality on a global scale. Economic growth entails an augmentation in a nation's citizens' productive potential and income (Ekpo et al., 2022). However, it should be maintained at a stable pace, as rapid growth can engender issues such as inequality, inflation, current account deficits, and environmental degradation. Gross Domestic Product (GDP) is commonly employed as a dependable tool to evaluate a nation's economic well-being, offering insights into the stabilization of the country's economy (Frank & Kereotu, 2020).

Real Gross Domestic Product serves as a macroeconomic metric to quantify a nation's economic output, factoring in inflation or deflation. Through the adjustment of nominal GDP for price fluctuations, RGDP provides an index for the volume of total output. GDP is instrumental as an indicator for economic downturns, rebounds, and a country's financial resilience against external influences. Economists prioritize real GDP, a macroeconomic indicator that portrays the value of goods and services generated by an economy over a specified duration, adjusted for inflation (Pehlivan, Ayşegül & Konat, 2021).

2.2 Theoretical Framework

2.2.1 Wagner's Law of Increasing State theory

The theory known as Wagner's Law of Increasing State Activity was formulated by the German political economist Adolph Wagner in 1893. Initially termed as the "law of increasing state activity," it emerged from Wagner's investigation in the 1880s into whether economic growth precipitated a rise in government expenditure. Wagner's inquiry, spanning industrial processes in the United States, United Kingdom, Germany, Japan, and other industrialized nations, revealed that industrialization correlated with an increase in per capita income (Lingxiao et al., 2016). This, in turn, prompted an expansion of governmental activities aimed at managing and regulating the market economy (Wagner, 1893).

The central premise of Wagner's Theory posits that public expenditure is an endogenous factor contingent upon the growth of national income. Therefore, an upsurge in national income triggers a corresponding increase in public expenditure. The theory argues that the growth in government spending is closely tied to increased industrialization and economic development. According to this law, as a nation undergoes industrialization, the proportion of public expenditures relative to total expenditures rises in tandem with the real income per capita.

Wagner (1893) delineated three factors contributing to the escalation of public expenditure. Firstly, during the industrialization process, there is a shift where public sector activities supplant private sector activities, leading to an augmentation in state functions such as administrative and protective roles (Pehlivan et al., 2021). Secondly, there arises a growing demand for governments to furnish social and welfare services encompassing education, public health, pension or retirement schemes, food subsidies, disaster relief, environmental conservation initiatives, and other welfare-related endeavors (Ekpo et al., 2022). Thirdly, increased industrialization fosters technological advancements and the emergence of large enterprises, which have a propensity to monopolize.

Consequently, the relationship between economic growth and governmental functions leads to a scenario where the governmental sector expands at a faster pace than the economy. Numerous historical instances support this enduring tendency, such as the escalating costs of defense over time, the expanding scope of state activities including social security and subsidies, heightened attention towards providing and financing public goods, population growth, urbanization, and rising prices (Rauf et al., 2012). The relevance of this theory to the present study lies in its assertion that government spending constitutes one of the foremost tools of fiscal policy. Policymakers leverage government expenditure to steer growth and macroeconomic performance, whether in times of crisis or during periods of recovery (Bendahmane & Chenini, 2021).

2.3 Empirical Review

Balk and Göksu (2023) undertake an investigation into the applicability of Wagner's Law to public expenditure in Turkey, analyzing various expenditure types within the framework of economic classification. Employing the ARDL method over the period 1950–2020, the researchers ascertain the validity of Wagner's Law in the Turkish context. Their findings reveal the validity of Wagner's Law for Turkey, particularly concerning transfer expenditures among sub-components, as indicated by the Mann and Peacock models. Notably, the study highlights that public expenditure, outpacing gross domestic product, is primarily driven by transfer expenditures.

In a similar vein, Ekpo et al. (2022) utilize a modified and extended aggregate production model to investigate the impact of government expenditure on economic growth in Nigeria from 1981 to 2018, employing the bound test (ARDL) approach. Their analysis reveals a long-term relationship between total government expenditure (LTGE) and economic growth in Nigeria, with LTGE exerting a positive influence on economic growth in accordance with Keynesian theory. Moreover, the Granger causality test indicates a unidirectional causal relationship from LGDP to LTGE, aligning with Wagner's theory.

Pehlivan, Ayşegül, and Konat (2021) explore the relationship between public expenditure and real gross domestic product (GDP) across OECD countries. Using panel data and clustering analysis over the years 2000–2019 for 37 OECD countries, they investigate the impact of total public expenditures and sub-headings on growth. The study's results indicate varying outcomes: while Wagner's Law holds true for some countries, the Keynesian view is applicable to others. Hence, public expenditure affects the RGDP of certain countries but not others.

Bendahmane and Chenini (2021) conducted a study to analyze the long-term correlation between government expenditure and economic growth, focusing on the applicability of Wagner's Law in Algeria spanning from 1970 to 2018. Employing the bounds test approach to cointegration and nonlinear autoregressive distributed lag bounds testing, the researchers found evidence of a relationship from economic growth to the magnitude of government expenditure. These empirical findings affirm the validity of Wagner's Law in the Algerian economy.

Aluthge, Jibir, and Abdu (2021) investigated Nigerian government expenditure by differentiating between capital and recurrent expenditures as predictors of economic growth using time series data from 1970 to 2019. Employing the Autoregressive Distributed Lag (ARDL) model, the study accounted for structural breaks in unit root tests and cointegration analyses to ensure robust results. The study concluded that capital expenditure has a significant positive impact on economic growth in both the short run and long run, whereas recurrent expenditure does not significantly influence economic growth over the same periods.

In a similar vein, Tenai (2020) explored the relationship between government expenditure and selected sectoral output performance in Kenya. Using annual time series data spanning from 1980 to 2016, the study assessed the effects of government expenditure on various sectoral output performances in Kenya, employing the ARDL model. The findings revealed a positive correlation between government expenditure and the output performance of agriculture, manufacturing, and service sectors, suggesting that government spending contributes positively to the performance of these sectors.

Frank and Kereotu (2020) conducted a study to assess the influence of Government Expenditure on Economic Growth, proxied by gross domestic product (GDP), in Nigeria. Utilizing secondary time series panel data spanning from 1998 to 2017 sourced from the Statistical Bulletin of the Central Bank of Nigeria (CBN), the researchers employed the Ordinary Least Squares (OLS) technique via the Windows SPSS 23 software for data analysis. They regressed GDP, the dependent variable and proxy for economic growth, against the independent variables of Inflation rate (IFR) and Interest rate (INTR). The study findings indicated that neither inflation rate nor interest rate had a significant impact on Gross Domestic Product, and hence on economic growth, in Nigeria.

Omodero (2019) investigated the impact of government expenditure on human capital development in Nigeria. Using the ordinary least squares method and secondary data covering the period from 2003 to 2017, the study revealed that recurrent expenditure had a positive effect on the human development index (HDI), while capital expenditure exhibited a negative and statistically insignificant impact on HDI.

Similarly, Muguro (2017) explored the relationship between public expenditure and economic growth in Kenya from 1963 to 2015. The study utilized secondary data from Economic Surveys, Statistical Abstracts published by the Kenya National Bureau of Statistics, Kenya Institute of Public Policy Research and Analysis, and the Ministry of Devolution and Planning. Employing the Vector Autoregression estimation technique with annual time series data, and employing a Distributed Lag Model with lagged explanatory variables, the study found non-significant effects of public expenditure components on economic growth in Kenya during the period.

Idris and Baker (2017) conducted an investigation employing the Autoregressive Distributed Lag model to assess the impact of government expenditure on Nigerian economic growth. Utilizing time series data spanning from 1980 to 2015, the study aimed to establish the relationship between public sector expenditure and Gross Domestic Product (GDP). The study's findings reveal a positive and statistically significant effect of public sector expenditure on economic growth in Nigeria.

Olubokun, Ayooluwade, and Olumide (2016) examined the effects of government expenditure and inflation rate on economic growth in Nigeria from 1981 to 2013. Drawing data from the Central Bank of Nigeria (CBN) statistical bulletin, they employed the Vector Autoregressive (VAR) modeling approach for analysis. The variance decomposition highlighted that elevated government expenditure and inflation significantly contributed to shocks in real gross domestic product. The study underscores the importance of understanding fluctuations in output growth, emphasizing the role of government expenditure and inflation in shaping Nigeria's economic landscape. It emphasizes the urgent need for policymakers to devise strategies to enhance real gross domestic product and foster sustainable economic growth and development in the country.

In a related study, Lingxiao et al. (2016) explored the relationship between public expenditure and economic growth in Romania from the perspectives of Keynes and Wagner's laws. Using annual time series data spanning from 1991 to 2014, post the fall of the Iron Curtain, the study tested five representations of both Wagner's and Keynes's Law. Employing the ARDL (Auto-Regression Distributed Lag) approach and Bounds Test based on Unrestricted Error Correction Model (UECM) estimation, the empirical results indicated a unidirectional long-run relationship from government expenditures to economic growth in Romania, suggesting that economic growth could influence government expenditure. However, Keynes's Law did not hold true over the period under examination.

Kambua (2014) investigated the impact of government expenditure on economic growth in Kenya through a descriptive study employing quantitative analysis of secondary data. The analysis utilized data sourced from the World Bank and IMF databanks spanning the period from 2007 to 2012. Granger Causality Test was employed to assess the predictive relationship between different time series variables. The findings of the study revealed a significant influence of government spending on sectors such as education, infrastructure, health, and defense.

Ogundipe and Oluwatobi (2011) explored the influence of government spending on economic growth in Nigeria utilizing the Johansen technique over the period from 1970 to 2009. Data collected from the Central Bank of Nigeria (CBN) Statistical Bulletin were used, encompassing variables such as Real Gross Domestic Product as the dependent variable, and government spending on administration, economic services, social and community services, and transfers as independent variables. The results suggested that while total expenditure (excluding education and health) had an insignificant negative impact on growth in the short run, capital expenditure might have a significant positive effect on growth rate in the long run.

3.0 Methodology

The study employed *ex-post facto* research design which involves the use of existing data that are not under the control of the researcher.

Economic growth is surrogated by real gross domestic product whereas the independent variable, government expenditure, is measured by Government Recurrent Expenditure (GRE), and Government Capital Expenditure (GCE). The instrument for data collection is the Nigerian Bureau of Statistics and Central Bank of Nigeria (CBN) statistical bulletin from which relevant time series data covering the period 1999 to 2022 were obtained. In addition to the descriptive analysis carried out, Ordinary Least Square regression model is used to test the hypotheses at 5% level of significance. The OLS regression analysis produces the coefficient of determination (R^2), adjusted coefficient of determination (R^{-2}), t-statistic and F-statistic.

The regression coefficients show how much and in which direction independent variables affect the dependent variable. A positive coefficient means a positive correlation, and a negative coefficient means a negative correlation. The decision rule for t-test statistic is to reject H_0 if t-computed is greater than t-tabulated and vice versa. However, the statistical software used in the study allows for decision rule based on level of significance. Therefore, we can then say that the null hypotheses are rejected if the *p*-value is less than 0.05 level of significance; otherwise, the null hypotheses are accepted.

The linear models that depict the relationship between government expenditure and economic growth are expressed below thus:

$$RGDP = \beta_0 + \beta_1 GCE + \mu \dots \dots \dots \text{eq i}$$

$$RGDP = \beta_0 + \beta_1 GRE + \mu \dots \dots \dots \text{eq ii}$$

Where,

β_0 = constant

β_1 = coefficients of the predictors

RGDP = Real Gross Domestic Product

GCE = Government Capital Expenditure

GRE = Government Recurrent Expenditure

μ = error term

4.0 Analysis of Data

4.1 Data Presentation

Table 4.1 shows the data collected for the purpose of analysis.

Table 4.1 Data Presentation

<i>Years</i>	<i>RGDP (₦' Billion)</i>	<i>GCE (₦' Billion)</i>	<i>GRE (₦' Billion)</i>
1999	24215.78	498.03	449.66
2000	25430.42	239.45	461.60
2001	26935.32	438.70	579.30
2002	31064.27	321.38	696.80
2003	33346.62	241.69	984.30
2004	36431.37	351.25	1110.80
2005	38777.01	519.47	1321.30
2006	41126.68	552.39	1390.20
2007	43837.39	759.28	1589.27
2008	46802.76	960.89	2117.36
2009	50564.26	1152.80	2127.97
2010	55469.35	883.87	3109.44
2011	58180.35	918.55	3314.51
2012	60670.05	874.70	3325.16
2013	63942.85	1108.39	3689.10
2014	67977.46	783.12	3426.94
2015	69780.69	818.35	3831.95
2016	68652.43	653.61	4160.11
2017	69205.69	1242.30	4779.99
2018	70536.35	1682.10	5675.20
2019	72094.09	2289.00	6997.20
2020	70800.54	1614.89	8188.81
2021	73382.77	2522.47	9145.16
2022	74752.42	3133.82	11002.31

Source: CBN Statistical Bulletin, 2022

4.2 Descriptive Analysis

Table 4.2 Descriptive Statistics

	<i>RGDP</i>	<i>GRE</i>	<i>GCE</i>
Mean	53082.37	3478.102	1023.354
Median	56824.85	3211.975	846.5250
Maximum	74752.42	11002.31	3133.820
Minimum	24215.78	449.6600	239.4500
Std. Dev.	17425.58	2897.793	745.5716
Skewness	-0.316086	1.110614	1.395032
Kurtosis	1.606457	3.433426	4.302355
Jarque-Bera	2.341604	5.121715	9.480584
Probability	0.310118	0.077238	0.008736
Sum	1273977.	83474.44	24560.50
Sum Sq. Dev.	6.98E+09	1.93E+08	12785172
Observations	24	24	24

Source: *Eviews 12 Descriptive Statistics Output, 2023*

The descriptive statistics in table 4.2 reveal that the mean Real Gross Domestic Product of Nigeria over the period under study is approximately ₦53,082.37 billion. The maximum RGDP recorded during this period is ₦74,752.42 billion, while the minimum is ₦24,215.78 billion, indicating a considerable range in economic output. The standard deviation of RGDP is approximately ₦17,425.58 billion, suggesting significant variability around the mean, highlighting the fluctuations in economic growth experienced over the years. The skewness coefficient of -0.316086 indicates a slightly left-skewed distribution of RGDP, suggesting a tendency towards higher values. Moreover, the kurtosis coefficient of 1.606457 suggests a relatively moderate level of peakedness in the distribution of RGDP, indicating that the distribution is moderately peaked compared to a normal distribution, implying some degree of volatility in economic growth rates. The distribution of RGDP is normal since the probability of Jarque-Bera statistics (0.310118) is greater than 0.05.

The descriptive statistics for government recurrent expenditure (GRE) reveal that the mean expenditure is approximately ₦3,478.102 billion. The maximum GRE recorded during the period is ₦11,002.31 billion, while the minimum is ₦449.6600 billion, indicating a wide range of expenditure levels. The standard deviation of GRE is approximately ₦2,897.793 billion, indicating substantial variability around the mean, suggesting fluctuations in government spending over time. The skewness coefficient of 1.110614 suggests a positively skewed distribution of GRE, indicating a tendency towards higher expenditure levels. Additionally, the kurtosis coefficient of 3.433426 indicates a relatively high level of peakedness in the distribution of GRE, suggesting a more pronounced peak compared to a normal distribution, implying that government recurrent expenditure experiences significant volatility and concentration around certain levels. The distribution of GRE is normal since the probability of Jarque-Bera statistics (0.077238) is greater than 0.05.

The descriptive statistics for government capital expenditure (GCE) indicate that the mean expenditure is approximately ₦1,023.354 billion. The maximum GCE recorded during the period is ₦3,133.820 billion, while the minimum is ₦239.4500 billion, indicating a wide range of capital expenditure levels. The standard deviation of GCE is approximately ₦745.5716 billion, suggesting significant variability around the mean, indicating fluctuations in government investment in capital projects over time. The skewness coefficient of 1.395032 suggests a positively skewed distribution of GCE, indicating a tendency towards higher capital expenditure levels. Furthermore, the kurtosis coefficient of 4.302355 indicates a relatively high level of peakedness in the distribution of GCE, suggesting a more pronounced peak compared to a normal distribution, implying that government capital expenditure experiences significant volatility and concentration around certain levels. The distribution of GCE is not normal since the probability of Jarque-Bera statistics (0.008736) is less than 0.05.

4.3 Test of Hypotheses

Ordinary Least Square regression was used to test the hypotheses at 5% level of significance.

4.3.1 Hypothesis One

H₀: Government capital expenditure has no significant effect on real gross domestic product of Nigeria.

H_a: Government capital expenditure has a significant effect on real gross domestic product of Nigeria.

Table 4.3 OLS Output for Hypothesis I

Dependent Variable: RGDP

Method: Least Squares

Date: 02/06/24 Time: 11:00

Sample: 1999 2022

Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GCE	17.32130	3.345472	5.177534	0.0000
C	35356.55	4205.153	8.407911	0.0000
R-squared	0.549244	Mean dependent var		53082.37
Adjusted R-squared	0.528755	S.D. dependent var		17425.58
S.E. of regression	11962.19	Akaike info criterion		21.69654
Sum squared resid	3.15E+09	Schwarz criterion		21.79472
Log likelihood	-258.3585	Hannan-Quinn criter.		21.72259
F-statistic	26.80686	Durbin-Watson stat		0.278518
Prob(F-statistic)	0.000034			

Source: *Eviews 12.0 Regression Output, 2023*

The answer to the first research question can be obtained from the regression output in Table 4.3 which ascertained the extent to which government capital expenditure (GCE) affects the real GDP of Nigeria. The regression analysis output indicates that the model has a relatively high explanatory power, as evidenced by the adjusted R-squared value of 0.528755. This value suggests that approximately 52.88% of the variation in Real Gross Domestic Product can be explained by government capital expenditure (GCE). The F-statistic of 26.80686 is statistically significant with a p-value of 0.000034, indicating that the overall regression model is statistically significant at the significance level of 0.05. This suggests that the model is significantly useful in predicting the effect of GCE on the dependent variable.

Specifically, the coefficient for government capital expenditure (GCE) is estimated to be 17.32130, with a p-value of 0.0000, indicating that GCE has a statistically significant positive impact on RGDP. Thus, a marginal increase in GCE leads to a corresponding increase in RGDP by ₦17.32 billion. Based on these results, we reject the null hypothesis (H₀) and accept the alternative hypothesis (H_a), concluding that government capital expenditure has a significant positive impact on Real Gross Domestic Product of Nigeria.

4.3.2 Hypothesis Two

H₀: Government recurrent expenditure has no significant impact on real gross domestic product of Nigeria.

H_a: Government recurrent expenditure has a significant impact on real gross domestic product of Nigeria.

Table 4.4 OLS Output for Hypothesis II

Dependent Variable: RGDP

Method: Least Squares

Date: 02/06/24 Time: 11:01

Sample: 1999 2022

Included observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GRE	5.098537	0.679769	7.500400	0.0000
C	35349.14	3050.981	11.58616	0.0000
R-squared	0.718871	Mean dependent var		53082.37
Adjusted R-squared	0.706093	S.D. dependent var		17425.58
S.E. of regression	9446.966	Akaike info criterion		21.22443
Sum squared resid	1.96E+09	Schwarz criterion		21.32260
Log likelihood	-252.6932	Hannan-Quinn criter.		21.25048
F-statistic	56.25601	Durbin-Watson stat		0.132575
Prob(F-statistic)	0.000000			

Source: *Eviews 12.0 Regression Output, 2023*

The answer to the second research question can be obtained from the regression output in Table 4.4 which ascertained the extent to which government recurrent expenditure (GRE) affects the real GDP of Nigeria. The regression analysis output indicates that the model has a relatively high explanatory power, as evidenced by the adjusted R-squared value of 0.706093. This value suggests that approximately 70.61% of the variation in Real Gross Domestic Product can be explained by government recurrent expenditure (GRE). The F-statistic of 56.25601 is statistically significant with a p-value of 0.000000, indicating that the overall regression model is statistically significant at the conventional significance level of 0.05. This indicates that the model is highly effective in forecasting the impact of government recurrent expenditure (GRE) on the dependent variable.

Specifically, the coefficient for government recurrent expenditure (GRE) is estimated to be 5.098537, with a p-value of 0.0000, indicating that GRE has a statistically significant positive impact on RGDP. Thus, a one-unit increase in government recurrent expenditure (measured in billions of Naira) is associated with an estimated increase of approximately ₦5.10 billion in Real Gross Domestic Product of Nigeria. Therefore, based on these results, we reject the null hypothesis (H₀) and accept the alternative hypothesis (H_a), concluding that government recurrent expenditure has a significant impact on Real Gross Domestic Product of Nigeria.

4.4 Discussions of the findings

The analysis reveals a significant positive effect of government capital expenditure on the Real Gross Domestic Product of Nigeria. This finding suggests that investments made by the government in infrastructure, such as roads, bridges, and utilities, contribute substantially to economic growth. Infrastructure development plays a vital role in stimulating economic activity by improving transportation networks, facilitating trade, and attracting private sector investment. The results are in line with economic theory, which posits that capital investments enhance productivity and efficiency, thereby fostering economic expansion. The positive impact of government capital expenditure on RGDP underscores the importance of strategic infrastructure development as a catalyst for sustainable economic growth in Nigeria. This finding aligns with the stance of Aluthge, Jibir and Abdu (2021) that capital expenditure has positive and significant impact on economic growth. This result equally agrees with the findings by Balk and Göksu (2023) and the postulation of Wagner's Law of Increasing State theory that policymakers use government spending in driving growth and macroeconomic performance (Bendahmane & Chenini, 2021).

Similarly, the study shows a positive and significant effect of government recurrent expenditure on the Real Gross Domestic Product of Nigeria. Recurrent expenditure encompasses ongoing operational costs, such as wages, pensions, and administrative expenses. The findings suggest that sustained government spending on recurrent items contributes positively to economic growth. This can be attributed to various factors, including the multiplier effect, whereby government spending circulates through the economy, generating income and demand for goods and services. Additionally, recurrent expenditure on social welfare programs and public services can enhance human capital development, leading to higher productivity and economic output. The results highlight the role of government recurrent expenditure in supporting consumption, investment, and overall economic activity, thus underlining its importance in driving economic growth in Nigeria. Similar finding was realised by Aluthge, Jibir and Abdu (2021); Balk and Göksu (2023) and Omodero (2019).

5.0 Conclusion and Recommendations

Government expenditure is a key component of fiscal policy and plays a crucial role in shaping economic growth and development. In Nigeria, government spending encompasses both capital expenditure and recurrent expenditure. In this analysis, we explore the impact of government expenditure, both capital and recurrent, on the economic growth of Nigeria, as measured by Real Gross Domestic Product. The findings of the study imply that investments in infrastructure, such as roads, bridges, ports, and power plants, enhance the productive capacity of the economy, reduce transportation costs, and improve overall efficiency, thereby stimulating economic activity and fostering long-term growth. Additionally, capital expenditure in sectors such as education and healthcare can lead to improvements in human capital, productivity, and innovation, which are critical drivers of economic growth. Also, government recurrent expenditure increases the real Gross Domestic Product of Nigeria since such expenditures directly influences aggregate demand and consumer spending patterns, thereby affecting economic growth. In fact, increases in government spending on recurrent expenditure boost household incomes, leading to higher consumption levels and increased

demand for goods and services, which in turn stimulate economic activity and RGDP growth in the short term.

In conclusion, government capital expenditure plays a crucial role in enhancing the economy's productive capacity, fostering long-term growth, and promoting sustainable development, while government recurrent expenditure influences short-term economic activity and aggregate demand. These results underscore the significant role of government expenditure in shaping the economic growth trajectory of Nigeria. Both government capital expenditure and recurrent expenditure have been identified as important drivers of Real Gross Domestic Product growth. The results suggest that strategic investments in infrastructure and sustained spending on recurrent items are essential for fostering economic development and improving living standards in Nigeria.

The study puts forward the following recommendations:

- 1) Nigerian government should increase investment in critical infrastructure projects, such as transportation networks, energy systems, and telecommunications, to stimulate economic growth and enhance competitiveness and prioritize the allocation of funds to projects that have the potential to generate significant long-term benefits for the economy, such as those aimed at improving connectivity, reducing transportation costs, and fostering regional development.
- 2) Ministry of Finance and Budget Planning should ensure efficient and transparent management of recurrent expenditure to maximize its impact on economic growth and social welfare. They should implement measures to enhance fiscal discipline, streamline spending processes, and eliminate inefficiencies in resource allocation.

References

- Aluthge, C., Jibir, A. & Abdu, M. (2021). Impact of government expenditure on economic growth in Nigeria, 1970-2019. *CBN Journal of Applied Statistics*, 12(1), 139-174.
- Balk, A., & Göksu, S. (2023). The Relationship Between Public Expenditures and Economic Growth in the Scope of Economic Classification: The Case of Turkiye. *Panoeconomicus*. <https://doi.org/10.2298/PAN220925006B>
- Bendahmane, A., & Chenini, M. (2021). Revisiting the validity of Wagner's law in Algeria during 1970-2018: new evidence from linear and nonlinear models. *Journal of Finance, Investment and Sustainable Development*, 6(2), 457-476.
- Ekpo, U. N., Ekere, J. D., & Inibeghe, M. O. (2022). Government expenditure and economic growth in Nigeria: aggregate level analysis using the bound test approach. *International Journal of Developing and Emerging Economies*, 10(1), 1-20.
- Frank, B. & Kereotu, O. (2020). Impact of government expenditure on economic growth in Nigeria. *World Journal of Finance and Investment Research*, 5(1), 21-31.
- George-Anokwuru C. & Ekpenyong, B. (2020). Government expenditure and inflation in Nigeria. *Journal of Economics and Management Sciences*, 3(2), 29-37.

- 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.
- Kambua, N. I. (2014). Effects of government spending on economic growth in Kenya. An Unpublished Research Project Submitted to the School Of Business, University of Nairobi.
- Lingxiao, W. A. N. G., Peculea, A. D., & Xu, H. (2016). The relationship between public expenditure and economic growth in Romania: does it obey Wagner's or Keynes's Law? *Theoretical & Applied Economics*, 23(3), 41-52.
- Muguro, J. W. (2017). Effect of public expenditure on economic growth in Kenya: 1963-2015. An Unpublished Masters Degree Dissertation Submitted to Department of Finance and Economics at Kca University, Kenya.
- Ogundipe, A. A. & Oluwatobi, S. (2010). Government spending and economic growth in Nigeria: evidence from disaggregated analysis. Covenant university, www.covenantuniversity.edu.ng.
- Ojarikre, O. & Ezie, O. (2015). Public expenditure growth and inflation in Nigeria: the causality approach. *International Journal of Economics and Management Studies*, 2(2), 1-6.
- Okon, D. (2022). India has surpassed Nigeria as the nation with the highest number of extremely poor people. <https://www.thecable.ng/india-overtakes-nigeria-as-worlds-poverty-capital#:~:text=For%20Nigeria%2C%20WPC%20said%2070,Nigeria's%20over%20200%20million%20people>.
- Olowofeso, O., Ankoma-Forkuo, M., Zirra, S., Falade, S. & Nsonwu, M. (2020). Symmetric and asymmetric effects of inflation on government expenditure in Nigeria. *Journal of Economics and Finance*, 11(5), 1-14.
- Olubokun, S., Ayooluwade, E. & Fawehinmi, F. O. (2016). Government expenditure, inflation rate and economic growth in Nigeria (1981-2013): a vector autoregressive approach. *Romanian Journal of Fiscal Policy*, 7(1), 1-12.
- Omodero, C. O. (2020). Analysis of factors influencing public capital investment in Nigeria. *Journal of Educational and Social Research*, 10(1), 62-72.
- Pehlivan, C., Ayşegül, H. A. N., & Konat, G. (2021). Empirical analysis of public expenditure-growth relationship in OECD countries: testing the Wagner Law. *Uluslararası Politik Araştırmalar Dergisi*, 7(2), 87-109.

Rauf, A., Qayum, A., & Zaman, K. U. (2012). Relationship between public expenditure and national income: an empirical investigation of Wagner's law in case of Pakistan. *Academic Research International*, 2(2), 533.

Taiwo, M. & Taiwo, A. (2011). Government expenditure and economic development: empirical evidence from Nigeria. *European Journal of Business and Management*, 3(9), 18-28.

Tenai, A. K. (2020). Effect of government expenditure on selected sectoral output performance in Kenya. An Unpublished Research Project Submitted to Kenyatta University.

Wagner, A. (1883). *Finanzwissenschaft*. Third edition. Leipzig: Winter.