

Impact of Government Expenditure on Economic Growth in Nigeria: Implications for Policy Implementation

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Abstract

Purpose - This study aims to assess the impact of government expenditure, specifically capital and recurrent expenditures, on economic growth in Nigeria. The objective is to determine which form of spending most effectively stimulates economic development and to offer policy guidance for optimizing fiscal resource allocation.

Design/methodology/approach - The research adopts an ex-post facto design using annual time series data from 1980 to 2022. Key variables include GDP growth rate, gross capital formation, employment, inflation, government capital expenditure, and recurrent expenditure. The Autoregressive Distributed Lag (ARDL) model and Dynamic Ordinary Least Squares (DOLS) techniques were employed to examine both short-run and long-run relationships among the variables, following unit root and cointegration tests.

Originality - The study contributes uniquely to fiscal policy literature by using a dual-model estimation approach (ARDL and DOLS) to robustly evaluate Nigeria's government expenditure effectiveness. It also focuses on the disaggregated effects of capital and recurrent expenditure in a developing economy context where such separation is often blurred in policy application.

Findings and Discussion - The results show that both capital and recurrent expenditures do not have a statistically significant effect on economic growth in Nigeria during the study period. In contrast, employment demonstrates a consistent positive impact. The analysis suggests inefficiencies, poor execution of capital projects, and inadequate fiscal targeting as contributing factors to the ineffectiveness of public spending. No long-run cointegration was established, further supporting the notion of weak fiscal transmission mechanisms.

Conclusion - Government expenditure in Nigeria, as currently structured, has limited effectiveness in fostering economic growth. The study recommends reforming public expenditure management, enhancing transparency and accountability, and prioritizing employment-generating projects to promote sustainable growth.

Keywords - Government Expenditure, Economic Growth, Nigeria, ARDL, DOLS

Introduction

Economic growth is a key macroeconomic goal for nations seeking to improve living standards, reduce poverty, and foster development (Ashakah, 2023; Ishioro, 2023; Ugochukwu & Oruta, 2021). For Nigeria, which is endowed with abundant natural resources but struggling with persistent economic challenges, achieving sustainable economic growth remains a priority. One of the crucial tools available to the government to pursue this goal is its expenditure policy (Ashakah, 2025; Akpata & Ejedegba, 2024).

Government expenditure plays a crucial role in stimulating economic activity and promoting development. It can broadly be categorized into capital expenditure and recurrent expenditure. Capital expenditure involves investments in long-term infrastructure and development projects such as roads, power plants, and educational facilities, which enhance the economy's productive capacity. On the other hand, recurrent expenditure covers the routine operational costs of government, including salaries, administration, and maintenance (Sosvilla-Rivero et al., 2025)

In Nigeria, the effectiveness of government expenditure in driving economic growth has been investigated by some studies (Sosvilla-Rivero et al., 2025; Iwo & Adagi, 2025; Ashakah, 2023; Ishioro, 2023; Soyebi & Umobong, 2024; Ugochukwu & Oruta, 2021), and the results of the studies are mixed. While significant funds have been allocated to various sectors, the desired economic outcomes have often been elusive due to inefficiencies, corruption, and resource mismanagement (Aigbokhan, 1996). Understanding the distinct impacts of capital and recurrent expenditure on Nigeria's economic growth is essential for designing effective fiscal policy, and this warrants more studies into the effects of government expenditure on economic growth.

This study investigates how government expenditure, specifically capital and recurrent spending, influences economic growth in Nigeria. By identifying the expenditure patterns that contribute positively or negatively to development, the research will provide insights into optimizing fiscal resource allocation. The remaining part of the study is organized as follows: the second section summarizes the related literature, the third section introduces the data and methodology, the fourth section presents and explains the empirical results of data analysis, and the last section provides the summary, conclusion and policy recommendations.

Literature Review

The debate on the impact of government expenditure and economic growth has been central to academic, policy and research. Government expenditure has been seen as a significant tool for achieving economic development, and several studies have focused on this area of research. Sosvilla-Rivero et al. (2025) empirically investigated the short- and long-term impact of public expenditure on economic growth. The study used annual data from 28 European Union (EU) countries from 1995–2022. It estimated a growth model augmented for public expenditure employing the Autoregressive Distributed Lag (ARDL) panel data approach. The results supported the view that different categories of public expenditures have dissimilar long- and short-term effects on the economic performance of EU countries.

Iwo and Adagi (2025) examined the impact of government expenditure on economic growth in Nigeria. Government expenditure was proxied by government expenditure on education, public administration expenditure and information and communication, while economic growth was proxied by Gross Domestic Product. An *ex-post facto* research design was used for the study with secondary data covering 2000 to 2023, sourced from the CBN Statistical Bulletin. The regression analysis was used, and the outcome showed that Government expenditure on education and public administration had no significant effect on gross domestic

product in Nigeria. Both coefficients were negative, while spending on information and communication had a positive significant impact on gross domestic product in Nigeria. The study recommended that the Nigerian government should increase the funding in the education sector to 26% as recommended by UNESCO to enhance productivity and boost the economy; the government should put up measures to checkmate those siphoning the funds allocated for public administration to grow the economy and government should promote information and communication and create a more enabling environment for the sector to operate and boost the economy.

Akpata and Ejedegba (2024) investigated the effects of human capital formation and aggregate domestic investment on economic growth and development in Nigeria. The study explored key variables, including government expenditure on health, education, household welfare, domestic investment, and economic growth. The findings revealed that government spending on education and workforce development significantly enhances GDP growth. The study underscored the necessity of sustained investment in human capital to maximize the long-term benefits of public expenditure. The study underscored the necessity of sustained investment in human capital to maximize the long-term benefits of public spending.

Sokolov and Matveev (2024) assessed the impact of these changes on GDP dynamics. To evaluate changes in fiscal policy, multipliers of taxes and public expenditures were calculated, including in the context of key functional sections of the budget classification, based on impulse responses of the structural VAR model of the Russian economy. The model was evaluated using data from 2004–2021. The Bayesian estimation method calculates the average-sized model (10 indicators). The estimated financial multipliers confirm the presence of a significant effect of fiscal policy on GDP; the most excellent stimulating effect was demonstrated by expenditures on social policy and the national economy.

Shanmugam and Shanmugam (2023) analyzed the effect of fiscal transfers on growth and regional growth convergence in India from 2005 to 2019, using the standard growth convergence model for panel data. Results indicate the growth convergence across Indian States. The regional income gaps reduced to 17.7–31.9% per annum. The fiscal transfers contribute to the growth of 22 out of 29 States and significantly to the convergence. Moreover, there was substantial evidence for convergence across General Category States and Special Category States. The average income growth was higher in Special Category States and higher in the global crisis period. The results were recommended to policymakers and other stakeholders so that they could adopt appropriate strategies to design a fiscal transfer policy to speed up India's convergence process.

Emwinloghosa et al. (2023) examined the impact of fiscal policy on inflation in Nigeria from 1981 to 2021. The study adopted an autoregressive distributed lag (ARDL) bounds testing approach. The unit root results revealed that other variables apart from inflation were stationary after the first difference. The bound test result showed that the variables cointegrate. The ARDL long-run result showed that oil revenue had a negative significant impact on inflation. In contrast, government recurrent expenditure and capital expenditure positively impacted inflation, with the effects of recurrent expenditure significant. The results showed

that the long-term impacts of oil revenue, recurrent expenditure, and capital expenditure were also maintained in the short run.

Olisaji and Onuora (2022) examined the impact of fiscal policy on Nigerian economic growth between 2015 and 2019. The study used Secondary data collected from the statistical bulletin of the Central Bank of Nigeria (CBN) 2020. The study also employed an ex-post facto research design and regression model to analyze the data collected. In the model, government expenditure and government revenue through companies' income tax (CIT) were regressed against the dependent variable of economic growth proxied by GDP growth. The result revealed that there was a significant and positive relationship between Companies Income Tax (CIT) and Economic Growth (EG) measured using Gross Domestic Product (GDP) with a p-value of 0.030, which was less than the 5% level of significance adopted. On the same note, the study found an insignificant and negative relationship between Government Expenditure (GE) and Economic Growth (GDP) with a p-value of 0.334, greater than the 5% significant level adopted. Therefore, The study recommended that the government formulate and implement workable fiscal policy options to enhance economic growth.

Ugochukwu and Oruta(2021) examined the effect of various components of government expenditures on economic growth in Nigeria between 1981 and 2020. The analysis was based on Secondary data. The study adopted the Error Correction model and the Granger Causality Test. The short-run model revealed that the components of government expenditures, like recurrent expenditures on agriculture, health and education, had an insignificant negative impact on economic growth. Recurrent expenditure on debt servicing and road and construction indicated a positive and negligible impact on economic growth. Concerning capital expenditures, government capital expenditures on social services were shown to have a negative and significant impact on economic growth.

In contrast, government capital expenditures on economic services indicated a positive and insignificant impact on economic growth in Nigeria. In the long run, all the components of government expenditures employed significantly affected economic growth. The research findings established no clear conclusion about whether Keynesian or Adolf Wagner's law was operational in Nigeria. The study concluded that the Nigerian economy was on the wrong path to sustainable growth and development. The study recommended that the government increase its allocations to priority sectors like health, education, agriculture and infrastructure.

Alymkulova et al. (2020) investigated the impact of fiscal policy on economic growth in the country from 1990 to 2016. The study used time series regression analysis to explore the relationship between various budgetary policy measures on development and annual data from the 1990-2016 period. Empirical results showed that tax revenues strongly affected economic growth, while government expenditures were insignificant. Aliyu and Mahmood (2019) established the relationship between the monetary and fiscal policy and economic growth in Nigeria and determined the policies' suitable percentage mix. The study uses Money supply, Tax revenue generated and GDP as elements of Monetary, Fiscal and Economic Growth, respectively, for 10 years, from 2006 -2015. The Pearson correlation technique established the relationship between the dependent and

independent variables. The analyses revealed that money supply made the most significant contribution to the prediction of GDP in Nigeria compared to tax revenue generated. The results of these findings were, however, translated to the proportion of the percentage mix as 87% and 13% for monetary and fiscal policy, respectively. Therefore, if the government increases expenditures, it should also adopt the necessary measures that will necessitate income generation, as well as provide governing policies to lower the expense of the income on consumable goods.

Udofia and Godson (2019) empirically analyzed the impact of government spending on the Nigerian economy. The research used secondary data from the Central Bank of Nigeria's Statistical Bulletin on various issues and the National Bureau of Statistics. The empirical measurement covered the period between 2000 and 2016. An Ordinary Least Square (OLS), Augmented Dickey-Fuller unit root test and Co-integration test were adopted to carry out an extensive analysis of the adopted variables, including Gross Domestic Product growth rate, recurrent expenditure and Capital expenditure. The result revealed that the variables had a significant effect in the positive direction. This implies that as recurrent expenditure increases, the economy's growth rate decreases. An increase in capital expenditure also had a positive influence on the Nigerian economy within the period considered. The following recommendations were made: Since recurrent expenditure could still thrive amidst corruption and embezzlement, government spending should be managed appropriately to raise the nation's production capacity and employment, increasing economic growth in Nigeria.

Elosiuba and Maduka (2017) examined factors surrounding fiscal policy measures and their effect on economic growth in Nigeria from 1981 to 2014. The main objective of the study was to ascertain the impact of government expenditure on the development of the Nigerian economy. It was expected that an increase in government expenditure, *ceteris paribus*, would increase investment and income via the multiplier. Moreover, a higher tax reduces disposable income and investment opportunities and inhibits real gross domestic product growth. The researcher used the Ordinary Least Squares (OLS) technique of multiple regression models using statistical time series data from 1981-2014. The statistical result showed a positive relationship between the dependent variable (actual gross domestic product) and the Independent variables (Government Expenditure and Taxes). This implies that government expenditure was a strong determinant of economic growth, mainly when properly directed towards providing adequate basic infrastructural facilities to stabilize investment activities. Consequently, the result agreed with the endogenous theory, which supported that government involvement through capital and recurrent expenditure could step up economic activities and growth.

Abdurrauf (2015) examined the short and long-run impact of government expenditure on economic development in Nigeria between the period of 1981 and 2013 using annual time series data sourced from World Development Indicators (2014) and the Central Bank of Nigeria (2014). It used government recurrent expenditure, government capital expenditure, government investment and tax revenue to indicate fiscal policy. Economic development was proxied by real per capita income. The model was estimated using Pair-wise Correlation to ascertain the relationship and then Cointegration and Error Correction Mechanism for

impact after confirming the data's stationarity using Unit Root. The result showed that government recurrent expenditure and capital investment significantly impacted economic growth in both the short and long run within the period under consideration. Capital expenditure had a short-run positive impact but not in the long run.

The empirical studies reviewed revealed that the results were mixed. Some of the studies supported the Keynesian, while others supported Wagner's law of public expenditure. Some other studies disagreed with Keynesian and Wagner's laws. The non-consensus of the results warrants more studies into the impact of government expenditure and economic growth.

Methods, Data, and Analysis

Research Design

This study adopted an ex-facto research design. An ex facto research design focuses on how independent variables affect the dependent variable. Our objective informed this adoption. Our aim in this study was to determine the impact of government expenditure government capital and recurrent spending) on economic growth in Nigeria.

Variables, Scope and Sources of Data

The variables considered for this study included gross domestic product growth rates (GDPGR), gross capital formation (GCF), employment (EMP), government capital expenditure (GOVCEX), government recurrent expenditure (GOVREX) and inflation rates (INFL). The scope of this study covered from 1980 to 2022 due to data availability. The data on the variables were sourced from the Statistical Bulletins of the Central Bank of Nigeria (CBN), the Nigeria Bureau of Statistics (NBS) and World Development Indicators (WDI). Specifically, the Inflation rate and government expenditures were sourced from the Central Bank of Nigeria and the Nigerian Bureau of Statistics. Gross capital formation, gross domestic product growth rate and employment were sourced from World Development Indicators (WDI, 2024).

Model Specification

This study aimed to examine the impact of government expenditure on economic growth in Nigeria. Specifically, the study investigated the effect of government capital expenditure and recurrent expenditure on economic growth (GDPGR). GDPGR was the dependent variable, and gross capital formation, employment, government capital expenditure, government recurrent expenditure and inflation were the independent variables. Government capital expenditure and government recurrent expenditure are the variables used in this study. The model was specified as follows based on the assumptions of the endogenous growth model:

$$GDPGR = f(GCF, EMP, GOVCEX, GOVREX, INFL) \text{ -----(3.1)}$$

The above functional model was translated into an econometric equation or model as stated below:

$$GDPGR = \beta_0 + \beta_1 GCF + \beta_2 EMP + \beta_3 GOVCEX + \beta_4 GOVREX + \beta_5 INFL + \mu \text{ ----(3.2)}$$

where;

GCF = Gross capital formation

EMP = Employment

GOVCEX = Government capital expenditure

GOVREX = Government recurrent expenditure

INFL = Inflation rates

μ = Error term

β_0 = Intercept

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = are coefficients of the explanatory variables, and each, as expected $\neq, 0$

μ = is the Stochastic error term

The a priori expectation is that a positive relationship between

Government expenditure and economic growth. Also, a positive relationship was expected between economic growth, gross capital formation and employment.

While a negative relationship was expected between growth and inflation; $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 > 0$ and $\beta_5 < 0$

Method of Estimation

Equation 3.2 was estimated using the Autoregressive Distributed Lag (ARDL) model. The ARDL model often analyzes dynamic relationships with time series data in a single equation framework. The value of the dependent variable is allowed to depend on its past value(s). The variables of interest can be stationary, non-stationary, or a mixture of the two variables. In its equilibrium correction representation, the ARDL model can separate the long-run and the short-run effect and test for cointegration or, more generally, for a long-run relationship among the variables included in a specified model. Estimating equation (3.2) using the ordinary least squares (OLS) estimator when the variables are not stationary will yield spurious regression. Applying the ARDL model would solve the spurious regression problem in the presence of non-stationary variables.

Also, the study employed the dynamic ordinary least squares estimation technique for robustness and to validate the results obtained from the ARDL model. The dynamic OLS (DOLS) estimator is a single equation estimator developed by Stock and Watson (1993). This is one of the advantages of the DOLS estimator. The estimator overcomes the endogeneity problem by incorporating the first differences of the explanatory variables and their leads and lags in the model to yield efficient (consistent and unbiased) long-run estimates. Other advantages of the DOLS estimator are its applicability irrespective of the order of integration of the variables $[I(0), I(1)]$, its ability to correct the problem of heteroskedasticity using a generalized least squares (GLS) procedure, and its superiority in small samples over alternative estimators (Stock & Watson, 1993).

Before estimating the model, the variables were tested for unit root using the Augmented Dickey-Fuller (ADF) test to ascertain the stationary status of the variables. To confirm if a long relationship existed among the variables, the ARDL bounds test procedures were employed. Post-estimation tests were also performed. These included the Jarque-Bera (JB) residual normality test, the Breusch-Godfrey (BG) serial correlation test, and the recursive sum of squares normality test. The Eviews 12 software was used for all computations and estimations.

Results

4.1 Descriptive Statistics

This section highlights the key statistical measures, including the mean, median, maximum, minimum, standard deviation, skewness, kurtosis, and the Jarque-Bera test for normality, as summarized in Table 4.1 below.

Table 4.1: Descriptive Statistics of Variables

Statistic	GDPGR	GFC	EMP	GCEXP	GREXP	INFO
Mean	5.145792	23.20415	57.31830	1046.193	3609.691	12.62558
Median	5.917685	22.04954	57.84500	874.7000	3314.513	12.53783
Maximum	15.32916	34.84563	58.13300	3133.821	11002.31	18.87365
Minimum	-1.79425	14.90391	55.02600	239.4509	461.6000	5.388008
Std. Dev.	3.681069	6.850270	0.981902	753.6940	2888.489	3.809057
Skewness	0.362132	0.232769	-1.00197	1.335885	1.087082	-0.04795
Kurtosis	4.199520	1.694974	2.642595	4.132752	3.369726	2.158519
Jarque-Bera	1.881596	1.839825	3.970882	8.070585	4.661034	0.687401
Probability	0.390316	0.398554	0.137320	0.017681	0.097245	0.709141
Sum	118.3532	533.6954	1318.321	24062.45	83022.89	290.3884
Sum Sq. Dev.	298.1058	1032.376	21.21090	12497202	1.84E+08	319.1961
Observations	23	23	23	23	23	23

Source: Author's Computation, 2025

The average Gross Domestic Product (GDP) growth rate over the study period was 5.15%. This suggests that, on average, the Nigerian economy experienced moderate growth during this time. The maximum GDP growth rate recorded was 15.33%, while the minimum value of -1.79% indicates periods of negative growth, reflecting potential economic challenges such as recessions or policy failures. The standard deviation of 3.68% signifies moderate variability, highlighting fluctuations in the country's economic performance. A skewness value of 0.36 indicates a slightly positively skewed distribution, suggesting that higher GDP growth rates are more frequent than lower ones. Additionally, the kurtosis value of 4.20 reflects a leptokurtic distribution, implying the presence of extreme values. The Jarque-Bera probability of 0.39 suggests that GDP growth rates were

approximately normally distributed.

The mean value of Gross Fixed Capital Formation (GFC) was 23.20, indicating the average level of investments in physical assets during the study period. The maximum GFC recorded was 34.85, while the minimum was 14.90, reflecting considerable variability in investment levels. This variability was further evidenced by a standard deviation of 6.85. The skewness value of 0.23 indicates a slightly positively skewed distribution. A kurtosis value 1.69 suggests a platykurtic distribution, meaning the data points were more spread out than a normal distribution. The Jarque-Bera probability of 0.40 supports the normality assumption for this variable.

The employment rate (EMP) has a mean value of 57.32%, indicating that over half of the eligible working population was employed on average during the study period. The maximum employment rate was 58.13%, while the minimum was 55.03%, suggesting relatively low variability. The standard deviation of 0.98% supports this observation. The skewness value of -1.00 reflects a negatively skewed distribution, indicating that employment rates are more concentrated around higher values. The kurtosis value of 2.64 was close to the standard distribution benchmark of 3. However, the Jarque-Bera probability of 0.14 suggests slight deviations from normality.

The mean government capital expenditure (GOVCEX) was 1 046.19, highlighting the average government spending on infrastructure and other long-term projects. The maximum value of 3,133.82 and the minimum of 239.45 indicate substantial fluctuations in capital expenditure. The standard deviation of 753.69 underscores the high variability in this variable. A skewness value of 1.33 reveals a positively skewed distribution. In contrast, a kurtosis value of 4.13 suggests a leptokurtic distribution, indicating the presence of extreme values—the Jarque-Bera probability of 0.02 points to a non-normal distribution of GOVCEX.

The mean recurrent expenditure (GREXP) was 3,609.69, reflecting significant government spending on administrative and operational activities. The maximum value of 11,002.31 and the minimum of 461.60 demonstrate a wide range of recurrent expenditures. The standard deviation of 2,888.49 confirms high variability in this variable. The skewness value of 1.09 indicates a positively skewed distribution, while the kurtosis value of 3.37 reveals a leptokurtic distribution. The Jarque-Bera probability of 0.10 suggests that GREXP was not strictly normally distributed.

The average inflation rate during the study period was 12.63%, indicating moderate inflationary pressures. The maximum inflation rate was 18.87%, while the minimum was 5.39%, reflecting significant fluctuations. The standard deviation of 3.81% highlights moderate variability. A skewness value -0.05 suggests a nearly symmetric distribution, while the kurtosis value 2.16 indicates a platykurtic distribution. The Jarque-Bera probability of 0.71 confirms the normality of the inflation rate data.

4.2 Correlation Coefficients

The Pearson’s pairwise correlation coefficients between pairs variables of the study are presented in Table 4.2. The coefficients indicate the extent or degree of correlation between pairs of the variables.

Table 4.2. Matrix of Correlation Coefficients

VARIABLES	GDPGR	GFC	EMP	GCEXP	GREXP	INFO
GDPGR	1					
GFC	0.156583	1				
EMP	0.748421	-0.103119	1			
GCEXP	-0.454254	0.206667	-0.709701	1		
GREXP	-0.613810	0.125861	-0.828825	0.941737	1	
INFO	-0.139080	0.330364	-0.234663	0.296284	0.315132	1

Source: Author’s Computation, 2025

The dependent variable in this analysis, the Gross Domestic Product Growth Rate (GDPGR), represents the economic growth of the countries under review. Examining its relationship with other independent variables through the correlation matrix provides insights into the factors influencing economic growth. The correlations between GDPGR and the independent variables (GFC, EMP, GOVCEX, GOVREX, and INFL) highlight their potential effects on economic growth.

The correlation coefficient between GDPGR and EMP is 0.75, indicating a strong positive relationship. This suggests that higher levels of employment are associated with increased economic growth. The correlation coefficient between GDPGR and GCEXP is -0.45, indicating a moderate negative relationship. This result suggests that increases in capital expenditure do not immediately translate into GDP growth during the period under review. GDPGR has a stronger negative correlation with GOVREX (-0.61). The correlation coefficient between GDPGR and GFC is 0.16, indicating a weak positive relationship. This implies that investments in fixed assets, such as machinery, equipment, and buildings, have a minimal direct impact on GDP growth during the period analyzed. The correlation coefficient between GDPGR and INFL is -0.14, indicating a weak negative relationship. This suggests that inflationary pressures have a slightly adverse effect on economic growth.

4.3 Unit Root Tests

Table 4.3. ADF Unit Root Test Results

<u>Variables</u>	<u>Level</u>		<u>First Difference</u>		<u>Second Difference</u>		<u>Integration</u>
	<u>t-Statistic</u>	<u>Prob.</u>	<u>t-Statistic</u>	<u>Prob.</u>	<u>t-Statistic</u>	<u>Prob.</u>	<u>Order</u>

<u>Variables</u>	<u>Level</u>		<u>First Difference</u>		<u>Second Difference</u>		<u>Integration Order</u>
GDPGR	-2.395216	0.1539	-4.128352	0.0051	-	-	I(1)
GFC	-2.002121	0.2836	-3.585694	0.0149	-	-	I(1)
EMP	-3.180382	0.0374	-	-	-	-	I(0)
GCEXP	0.643597	0.9870	-7.243457	0.0000	-	-	I(1)
GREXP	8.717225	1.0000	-7.871317	0.0000	-	-	I(1)
INFO	0.143193	0.7181	-3.638442	0.0138	-	-	I(1)

The results show that the Gross Domestic Product Growth Rate (GDPGR), gross capital formation (GFC), government capital expenditure (GCEXP), government recurrent expenditure (GREXP), and inflation (INFL) were not stationary at levels, as indicated by the ADF t-statistic of value greater than 5 percent. Only employment (EMP) was stationary at a level with a probability value of less than 5 percent.

Discussion

This section presents the results of the model estimation techniques, including the ARDL model and the Dynamic OLS (DOLS) in Table 4.4.

Table 4.4: ARDL Estimation Short-run Models Results

<u>Variable</u>	<u>Coefficient</u>	<u>Standard Error</u>	<u>t-Statistic</u>	<u>Probability</u>
GDPGR(-1)	-0.058398	0.267527	-0.218289	0.8309
GFC	-0.059139	0.173147	-0.341552	0.7386
EMP	6.197870	2.544691	2.435608	0.0314 **
EMP(-1)	-7.624737	4.506849	-1.691811	0.1165

Variable	Coefficient	Standard Error	t-Statistic	Probability
GOVCEX	7.72E-05	0.002605	0.029643	0.9768
GOVCEX(-1)	0.004817	0.003063	1.572739	0.1418
GOVREX	-0.002487	0.001274	-1.951478	0.0747 *
INFL	-0.127371	0.173500	-0.734123	0.4770
INFL(-1)	0.236186	0.148489	1.590595	0.1377
C (Constant)	92.33031	156.9570	0.588252	0.5673

Statistics	Value
R-squared	0.795600
Adjusted R-squared	0.642300
F-statistic	5.189820
Prob(F-statistic)	0.005050
Durbin-Watson stat	1.874137

Table 4.5: Dynamic OLS Estimation Results
Dependent Variable: GDPGR

Variable	Coefficient	Standard Error	t-Statistic	Probability
GFC	0.104707	0.075244	1.391571	0.1820
EMP	2.417344	0.919195	2.629849	0.0176 **
GOVCEX	0.002631	0.002071	1.270149	0.2211
GOVREX	-0.000770	0.000678	-1.135369	0.2720
INFL	-0.020532	0.135819	-0.151169	0.8816
C (Constant)	-135.5543	53.60542	-2.528743	0.0216 **

Statistics	Value
R-squared	0.642399
Adjusted R-squared	0.537222
Long-run Variance	4.715500

The coefficient of current employment (EMP) estimated at 6.197870 with a probability value of 0.0314, shows that employment was statistically significant at the 5% level. Employment had a positive impact on economic growth during the period of the study. This finding agrees with the findings of Olawunmi and Ayinla (2008). The coefficient of the first lag of GDPGR was estimated at -0.058398 with a probability value of 0.8309. It showed that it is not statistically significant in impacting economic growth in the current year as the probability failed the significant test at the 5% level. Other variables (GCF, EMP(-1), GOVCEX, GOVCEX(-1), GOVREX, INFL, INFL(-1) included also failed the significant test at the 5% level. These results are in disagreement with a priori expectations and the findings of Shanmugam and Shanmugam (2023), Ashakah and Wanogho(2021), and Onabeyake, Maku, and Ashakah (2024).

The results obtained from the Dynamic OLS estimation technique consistently confirmed the results of the ARDL model. The findings imply that Nigeria's government capital and recurrent expenditures were poorly channeled to impact economic growth. The results showed that the Nigerian government should implement viable fiscal and economic policies to boost economic growth in Nigeria. The findings imply that government expenditures, both recurrent and capital, have not been effectively contributing to economic growth. This suggests inefficiencies in resource allocation, mismanagement, or delays in capital project implementation. Policymakers must focus on improving the quality and productivity of public spending to ensure it drives economic growth. The R-squared value of 0.795600 showed that the estimated model had a good fit; about 80% of the variations in the dependent variable could be explained by all the independent variables included in the model. The Durbin-Watson statistic of about 1.8741 showed no autocorrelation in the estimated model. The model can be used for policy formulation and implementation.

4.5.1 Bound Test for Cointegration

The ARDL bound test determines whether a long-run relationship exists among the variables. Table 4.6 presents the results.

Table 4.6: ARDL Bound Test Results

Test Statistic	Value
F-statistic	4.000061

Critical Values		I(0)	I(1)
10%	2.407	3.517	
5%	2.910	4.193	
1%	4.134	5.761	

The F-statistic value (4.000061) fell below the upper bound critical value (4.193) at the 5% level, confirming the non-existence of a long-run relationship among the variables.

Conclusion

This study examined the impact of government recurrent expenditure and capital expenditure on economic growth in Nigeria using annual time series data from 2000 to 2022. The study aimed to address two primary objectives: to investigate the effect of government recurrent expenditure on economic growth and to analyze the impact of government capital expenditure on economic growth. The study employed robust econometric techniques, including the Dynamic Ordinary Least Squares (DOLS) and the Autoregressive Distributed Lag (ARDL) models, to evaluate the impact of government expenditure on economic growth in Nigeria. The study's findings revealed significant insights into the role of government expenditure in economic growth. First, the results showed that government recurrent and capital expenditures did not have a statistically significant impact on economic growth in Nigeria during the study period. Second, the results of the government capital expenditure (GCEXP) indicated that it does not significantly impact economic growth. Despite its expected role in driving infrastructure development and stimulating economic growth, the insignificance of capital expenditure may point to issues such as delays in project implementation, corruption, and inefficient resource utilization, which undermine its effectiveness. The cointegration tests confirmed the non-existence of a long-run relationship among the variables, indicating that despite short-term fluctuations, the variables tend to move together over time. This result supports using long-run estimation techniques such as the DOLS and ARDL models, which provide consistent and reliable estimates. Furthermore, the diagnostic tests confirmed the reliability and stability of the estimated models. The results showed no evidence of serial correlation. These tests validated the robustness of the findings and ensured that the model was suitable for policy formulation and implementation. In conclusion, the study showed the limited effectiveness of government recurrent and capital expenditures in stimulating economic growth in Nigeria. The findings pointed to the need for reforms in public expenditure management and implementing policies prioritizing employment generation to achieve sustainable economic growth.

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