

ECONOMIC GROWTH IN DEVELOPING NATIONS: IMPACT ANALYSIS OF 1981-2023 NIGERIA GOVERNMENT RECURRENT EXPENDITURE

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Abstract

The study examined economic growth of developing nations: impact analysis of government recurrent expenditure from 1981 to 2023. The autoregressive distributed lag (ARDL) model technique was employed. The result demonstrated the restoration of 96% of the previous period's disequilibrium to equilibrium in the current period. It is also found out that economic services of government recurrent expenditure on agriculture (EGRXA) has a negative impact on Nigeria's economic growth (NEGR) in both the short run and the long run. Economic services of government recurrent expenditure on road construction (EGRXR) and economic services of government recurrent expenditure on other economic services (EGRXO) have a negative insignificant impact on (NEGR) in both the short and long run, respectively. However, economic services of government recurrent expenditure on communication (EGRXT) has a positive significant impact on NEGR both in the short and long run, respectively, while Nigeria inflation rate (NIFR) has a negative, insignificant impact on NEGR both in the short run and long run, respectively. The study found that government spending has a big effect on Nigeria's economic growth.

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***Related declarations are provided in the final section of this article.*

It also found that EGRXT is the most productive and effective part of government recurrent economic services spending, and it has a big and positive effect on NEGR in both the short and long term. Through the budget and allocation office, the study suggested that the government intentionally set aside more money for ongoing costs of economic services in the agricultural sector. This would help boost production in that sector. Every resource allocated to other sectors should be monitored and accounted for, and government spending on EGRXT should be sustained and increased in order to enhance productivity.

Introduction

Governments all over the world interfere in economic activities through both monetary and fiscal policies to achieve desirable macroeconomic goals. The majority of developed and developing nations employ public expenditure to enhance income distribution, direct resource allocation to desired areas, and influence the composition of national income (Okere, Uzowuru & Amako, 2019). In developing nations, government expenditure is particularly significant as a policy instrument for promoting growth and equitable distribution. In the majority of these nations, it is widely recognised that government expenditure is utilised to facilitate the advancement of infrastructure, human capital, and technology that are essential for growth as well as to establish the conditions and incentives that will encourage private investment and growth (El-Yaqub, Akintade, Akomolafe & Ismail, 2025). Government expenditure refers to the spending carried out by the government using revenue generated from taxes, levies, and other income sources (Assi, Dimson, Goodman & Andersen, 2019; Okere, *et al.*, 2019).

The need for government to intervene in economic activities became more pronounced during the Great Economic Depression of the 1930s that culminated in the birth of the Keynesian Economics School of thought, contrary to the classical school of thought that the government has no business in business, but argued on working principles of the invisible hands of demand and supply that interplay to create necessary adjustments in relation to output determination and employment (Shaikh 2009; Backhouse, 2015). The term “government spending” or “government expenditure” encompasses all forms of government investments, transfers, and purchases. Such spending plays a crucial role in alleviating poverty (Farooq, Faheem & Gardezi, 2023).

According to Keynesian theory, government expenditure can stimulate aggregate demand, thereby promoting further economic growth and increasing employment opportunities. Conversely, reducing government spending may produce adverse effects on overall economic performance. The economy is stimulated when the government spends more because it raises demand for goods and services. Higher production levels and employment rates as a result of

this rise in demand support economic expansion. Spending by the government can also be very important in lowering unemployment. Redistributing income is another major goal of government spending, which is crucial for lowering poverty and advancing equality (Tenai, 2020).

Government expenditure is generally divided into capital expenditure and recurrent expenditure. Capital expenditure involves government spending on the creation or acquisition of non-current assets that have a lasting impact. Although the benefits of such spending are not immediately apparent, it is crucial for economic growth and development. Examples include the construction of roads, buildings, educational and healthcare facilities, dams, and air and seaports. Recurrent expenditure, also referred to as government consumption, pertains to spending on items that are used up within a short period or expenses regularly incurred to maintain government operations. These include wages and salaries, consumables such as stationery for schools, medical supplies for healthcare services, national defence, pensions, and general costs of governance (Andinyanga & Anietie, 2022).

The government's total expenditure, which encompasses both capital and recurrent expenditures, increased at an irregular rate from approximately ₦11.4 billion in 1981 to approximately ₦60.3 billion in 1990 and 12.1641 trillion in 2021 (CBN, 2021). The federal government's spending in Nigeria has been significantly impacted by recurring expenditures, which are a result of factors such as the growth of the civil service and the disproportionate salaries of political office holders, among others. Recurrent expenditure increased from ₦4.8 billion in 1981 to approximately ₦36.2 billion in 1990 and surpassed ₦9.1452 trillion in 2021. Capital expenditures also underwent some changes during these periods, as the total capital expenditure increased from ₦6.6 billion in 1981 to ₦24 billion in 1990 and ₦2.5225 trillion in 2021 (CBN, 2021). There is no doubt that the government spends more on recurrent expenditure than capital 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 (Okere *et al.*, 2019). The large quantum of funds injected into the economy by the Nigerian government to finance the recurrent and capital expenditure has therefore led to an increase in aggregate money supply without the corresponding stability of the macroeconomic variables (employment/unemployment rate, interest rate, balance of payment, consumer price index, gross domestic product and so on (El-Yaqub & Ismail, 2025; Monogbe, Achugbu &

Davies, 2016). Rising government recurrent expenditure is one of the ways the government has used to support economic growth and development (Ekpo, Ekere & Inibeghe, 2022).

Over the years, the Nigerian economy has grown unevenly and frequently slowly, much like the economies of many developing nations. The federal government's recurrent spending is one of the main causes of this rise. Recurrent spending by the federal government, which includes payments for purposes other than capital projects, is also essential for promoting sustainable economic growth (El-Yaqub, et al., 2024; Frank & Kereotu, 2020).

According to some perspectives, government spending can be a significant growth engine, while others contend that excessive government spending might hinder economic expansion (Pehlivan, Ayşegül & Konat, 2021; El-Yaqub, Akomolafe & Owunnah, 2025). This emphasizes the need for a more thorough comprehension of the connection between Nigeria's economic growth and government spending. Some argue that there is no meaningful relationship between government spending and economic growth, while others contend that there is a positive association (Idris & Baker, 2017, Akomolafe & Agunbiade, 2019).

Nigerian governments have been investing large sums of money in infrastructure, operating costs, and expenditures in the hope that this will accelerate the nation's economic growth and development (El-Yaqub, Usman, Musa & Ismail, 2024). However, current trends indicate that the rate of output growth is outpacing the rate of economic expansion. According to statistics, for instance, the government grew from ₦60.3 billion in 1990 to 12.1641 trillion in 2021 without the economy growing at a rate that matched the increase in government (CBN, 2021). Despite the fact that Nigeria's gross domestic product (GDP) increased by an average of 7% between 1970 and 1979, it experienced an average decline of 0.9% in corresponding periods due to numerous recessions. Instead of experiencing economic growth, the country plunged into recession as a result (Okere *et al.*, 2019).

The impact of government expenditure on economic growth in the Nigerian economy is revisited in this research in light of the competing claims made in the literature that government improve economic growth (Awode and Akpa, 2018, Idris and Bakar, 2017, Ihugba and Njoku, 2017, and Jibir and Aluthge, 2019) but Okere *et al.*, 2019; Farooq *et al.*, 2023; Gukat and Ogboru, 2017; Nurudeen and Usman, 2010; Segun and Adelowokan, 2015; Awode and Akpa, 2018 argued that government spending do not improve economic growth, It is on the inclusive results that this study also wants to reinvestigate the impact of government expenditure on Nigeria's economic

growth. Lastly, the study was motivated by separate data on government recurrent expenditure. Few studies have only looked at the effects of government capital expenditure and recurrent expenditure. Others, like Gukat and Ogboru (2017), went even further and separated government capital expenditure and recurrent expenditure into administration, economic service, social and community service, and transfer payment (Ismail, et al, 2025). This study, on the other hand, only looks at economic service under recurrent expenditure, which is an area that many scholars didn't pay enough attention to. The study focuses on the impact of public recurrent expenditure on economic growth with disaggregated data only on economic services by looking at the contributions of government recurrent expenditure on agriculture, road construction, communication and other economic services.

The study is structured as follows; section one deals with the introduction while section two, explains literature review and theoretical framework. Section three presents the methodology of the study and section four focus on data analysis, discussion of results. Finally, section five presents the conclusion and recommendations of the study.

2.0 Literature Review

Conceptual Review

Government expenditure is the sum of all the funds that the government allocates to a variety of services and facilities in order to stimulate economic growth and development, (Jeff-Anyeneh and Ibenta, 2019; Akomolafe & Agunbiade, 2019). Ukwueze (2018) disaggregates or classify public expenditures into subheadings, such as recurrent expenditures and capital expenditures. The recurrent expenditures are expenditures or purchases of stationeries, wages and salaries of workers, fuel, electricity bills and other bills, interest on loans, and maintenance costs. They are all examples of recurring expenses that the government incurs. The majority of this expenditure is comprised of wages, salaries, and supplements, as well as spending on goods and services and consumption of fixed capital (depreciation) (CBN 2021). Capital expenditures on the other hands, are allocated to initiatives such as roads, airports, health, education, electricity production, telecommunications, and water. Capital expenditures are constructions undertaken by the government on roads, bridges, health centres, schools, military installations and hardware. Capital expenditures, on the other hand, are payments made for the acquisition of intangible assets, stock, property, or fixed capital assets. A prominent example of infrastructure initiatives is the construction of new schools, hospitals, or highways. Although the majority of donor-

funded "capital" expenditure relates to projects, it also includes payments on non-capital expenditure (CBN 2021).

Anyiwe and Oziegbe (2020) claimed that economic growth is linked to increasing levels of urbanisation, health, education, technology, and production across all industries. Furthermore, economic growth is defined as the gradual expansion of a nation's capacity to offer a broader selection of economic goods and services to its populace (El-Yaqub, Ismail & Bappayo, 2024). This process also leads to an increase in national production and income, as it entails the gradual expansion of the economy's productive capacity. Economic growth is a phenomenon in which the national income, population, and real per capita income all significantly and persistently rise over time. The expansion of the system in one or more dimensions is all that's needed to achieve economic progress; no fundamental adjustments are required (Anyiwe & Oziegbe, 2020; El-Yaqub, Akomolafe & Owunnah, 2025). Ukwueze (2018) states that a nation is considered to be economically developed when there is a noticeable and long-lasting growth in its production or per capita income, together with changes in the size of the labour force, consumption, capital, and trade volumes.

Empirical Review

Chandana, Adamu, and Musa (2020) examined the impact of government expenditure on GDP growth in Nigeria. This study examined the correlation between economic development in Nigeria and capital and recurrent government expenditure by employing time series data from 1970 to 2019. The investigation implemented the ARDL (Autoregressive Distributed Lag) model. In the co-integration analysis and unit root test, structural flaws are taken into account to make sure the results are reliable. Capital investment does influence economic development, as opposed to recurrent expenditure, which does not influence growth in the short or long term, according to the primary conclusions of the study. Ultimately, the study's results are consistent with the notion that a greater portion of the government's expenditures should be allocated to initiatives that enhance the quality of life for their constituents. Additionally, the government should exercise caution when allocating funds; however, it should allocate funds to initiatives that will contribute to human development and the nation's overall spending practices.

Onifade *et al.* (2020) conducted research on the relationship between GDP growth and fixed and variable government expenditure in Nigeria. They study employed ARDL model. The research

indicated that recurrent expenditure has a negative impact, while capital investment has a minor but beneficial effect on GDP.

Rehman, Khan, and Tariq (2020) examined the relationship between government expenditure composition and economic growth in Pakistan, focusing on the period from 1973 to 2018. The study employed the ARDL approach, incorporating results from the ADF test. Their findings indicate that certain components of public spending such as expenditures on research and development (R&D), subsidies and transfers, employee compensation, and education have a significant and positive effect on GDP per capita. Conversely, spending on the military and interest payments on loans was found to have a significant negative impact on per capita economic output. The study recommends that the government prioritize increased investment in employment, R&D, and education to accelerate national economic growth.

Aremu, Babalola, Aninkan, and Salako (2020) examined the impact of expenditures on essential industries on GDP growth in Nigeria. The Autoregressive Distributed Lag model (Bound Test Co-integration Approach) was employed to determine the short- and long-term impacts of government expenditure on GDP growth in the study. The results indicated that government expenditures on defence have a negative impact on economic development, while expenditures on agriculture have a positive impact. There was no correlation between sustained economic expansion and government spending on transit, schools, and phones.

Okere *et al.* (2019) investigated the impact of Nigerian government expenditures on GDP growth. The primary objective of the investigation is to ascertain the extent to which Nigeria's economic growth is influenced by government expenditures, which spans the years 1981–2016 with the error correction model (ECM) technique and Granger causality. The Granger Causality findings demonstrated a bidirectional causal relationship between economic growth and government expenditure on services and administration. Economic development and community services are causally related, but only in a single manner.

Phiri (2019) analyzed the effects of military expenditure on economic growth in Nigeria, and found that the current level of defence expenditure does not facilitate growth and development. This was determined through the use of a VAR estimation method. The finding revealed that military expenditure does not translate to economic growth. He suggests that the government reduce defence spending and allocate the funds to other sectors of the economy in order to stimulate growth.

Gregorious and Ghosh (2019) examined the relationship between government expenditure and economic growth in the UK with the heterogeneous panel model. Gregorious and Ghosh (2019) revealed that the relationship between government expenditure and economic growth was substantial. They suggested that the economy be stimulated by increasing government expenditure. Ditimi, Nwosa, and Ajisafe (2019) examined the relationship between the components of government expenditure and economic growth in Nigeria from 1970 to 2018, with a particular emphasis on education, agriculture, health, and transportation and telecommunications factors. The results of the long-term and short-term regression estimates indicated that the most significant impact of government expenditure components on economic growth was on agriculture.

Ebaid and Bahari (2019) identified a unidirectional relationship between government expenditure and economic growth using data from Kuwait and the ARDL estimation method. They suggested that for government spending to effectively influence economic growth, it must follow a specific spending pattern. Similarly, Olayungbo and Olayemi (2018), employing a Vector Error Correction Model with Nigerian data from 1981 to 2015, found that government expenditure negatively and significantly affects economic growth in both the short and long run. This outcome was attributed to the perceived debt burden associated with excessive government spending. Consequently, they recommended that the government align its spending with budgetary revenues and minimize deficits to mitigate the adverse impact of expenditure on economic growth.

Nworji, Okwu, Obiwuru, and Nworji (2018) conducted research that investigated the correlation between economic growth and public spending in Nigeria. Variables that were considered significant indicators of both economic growth and government expenditure from 1970 to 2017 were incorporated into the study. The Ordinary Least Square (OLS) multiple regression model was implemented due to the apparent causal relationship between government expenditure and economic growth. The study's results indicate that capital and recurring expenditure on economic services did not have a substantial impact on economic growth. The impact of capital expenditures on transfers on growth was negligible. Both one-time and ongoing expenditures on social and community services, as well as ongoing expenditure on transfers, significantly contributed to economic growth.

Theoretical Framework

The Keynesian theory of public expenditure was adopted from among the reviewed theories because it is applicable to the issue under investigation. The reason for this is that, according to his theory, the Nigerian economy's production and employment levels were significantly lower than they would have been if the total demand had been sufficient. A return to full employment for the economy would be feasible if demand could be increased, resulting in increased production and employment. Keynes also believed that expansionary fiscal policy could achieve this. When the economy was in a downturn, Keynes advocated for the government to run a deficit by increasing spending and reducing taxation, rather than attempting to balance the budget.

Keynes contended that there is a direct correlation between increased government spending and overall demand. The reduction in taxes would increase the after-tax earnings of households, and they are expected to spend the majority of this additional money, thereby increasing overall demand. The Keynesians favoured a higher budget deficit in order to mitigate a recession. In the event that inflation was a concern during an economic expansion, Keynesian thinking favoured the implementation of more stringent fiscal policy measures to mitigate excessive demand. In this scenario, it would be feasible to combat inflation and reduce overall demand by increasing taxes, reducing government spending, and transitioning to a budget surplus.

Consequently, Keynes was opposed to the notion that the government's treasuries should be depleted. He stated that budgetary policy should be contingent upon economic conditions. The Keynesian school of thought posits that governments should operate deficits during recessions and surpluses when inflation is caused by excessive demand. Is it possible for fiscal policy to mitigate economic volatility? The Keynesian theory of fiscal policy was the trend in the field of economics during the 1950s and 1960s. At that time, the majority of economists believed that fiscal policy could be implemented in a manner that would counteract the effects of business cycle fluctuations and have a substantial impact on the economy. However, the mission at hand is more difficult than initially anticipated. To have a stabilising impact on the economy, fiscal policy adjustments must be made at the right time.

3.0 Methodology

The study used an ex post facto research design to determine the impact of government recurrent expenditure on economic growth. The ex post facto strategy is chosen because it allows the researcher the ability to control the variables, mostly because they have already happened and

cannot be altered. One quasi-experimental approach is the ex post facto effect design, which looks at how several independent variables affected the dependent one. The Auto-Regressive Distributed Lag (ARDL) technique was employed in the empirical analysis of this research. It utilised yearly time-series data and covered a 43-year period, from 1981 to 2023. The ARDL bond testing method is employed to investigate the long- and short-term relationship between the independent and dependent variables of the study. As Pesaran *et al.* (2001) developed ARDL. ARDL method is applied to deal with the variables having stationary of series mixture of I(0) and I(1). ARDL model is superior to the other cointegration model and provides reliable results for small sample size (Pesaran *et al.*, 2001). The unit root, ARDL bound test and diagnostic checks were carried out as well.

Nature and Sources of Data

The study employs time series data for the period of 1981 to 2023. Data on economic growth proxied by GDP growth rate being the dependent variable and inflation rate being the control variable were sourced from World Bank development indicators (WDI, 2023) while government recurrent expenditure on agriculture, road construction, communication and other economic services.; formed the independent variables. They were sourced from the statistical bulletin of the CBN 2023.

Model Specification

The study adapted Okere *et.al* (2019) model. Their model is specified as follow:

$$RGDP = f (ADMIN, ECON, COMTY, TRSF) \dots\dots\dots (1)$$

Expressed in econometric form as:

$$RGDP = \alpha_0 + \alpha_1 ADMIN + \alpha_2 ECON + \alpha_3 COMTY + \alpha_4 TRSF + u \dots\dots\dots (2)$$

Where:

RGDP= Real Gross Domestic Product

ADMIN=Government Expenditure on Administration

ECON= Government expenditure on economic Services

COMTY= Government Expenditure on Community Services

TRSF= Government Expenditure on Transfers

μ = error term

Their model was therefore modified with introduction of inflation rate as control variable, and further disaggregate components of government recurrent expenditure on economics services into agriculture, road construction, communication, and other economics services. Then, also use GDP growth rate as proxied for economic growth. The model is now specified to achieve the objective of this study as follows:

$$\text{NEGR} = \alpha_0 + \alpha_1 \text{EGRXA} + \alpha_2 \text{EGRXR} + \alpha_3 \text{EGRXT} + \alpha_4 \text{EGRXO} + \alpha_5 \text{NIFR} + U \dots (3)$$

Where:

NEGR = Nigeria Economic growth (GDP growth Rate as proxy for economic growth)

EGRXA = Government Recurrent Expenditure on agriculture

EGRXR = Government Recurrent Expenditure on road construction

EGRXT = Government Recurrent Expenditure on communication

EGRXO = Government Recurrent Expenditure on other economics services

NIFR = Nigeria inflation rate

U = error term, α_0 = intercept, α_1 α_2 α_3 , α_4 , α_5 = Coefficients of the model

Therefore, ARDL representation of the relationship among the variables is provided in Eq. (4) as follows:

$$\begin{aligned} \text{NEGR}_t = & \gamma_0 + \gamma_1 \text{NEGR}_{t-1} + \gamma_2 \text{EGRXA}_{t-1} + \gamma_3 \text{EGRXR}_{t-1} + \gamma_4 \text{EGRXT}_{t-1} + \gamma_5 \text{EGRXO}_{t-1} + \gamma_6 \text{NIFR}_{t-1} \\ & + \sum \beta_1 \Delta \text{NEGR}_{t-1} + \sum \beta_2 \Delta \text{EGRXA}_{t-1} + \sum \beta_3 \Delta \text{EGRXR}_{t-1} + \sum \beta_4 \Delta \text{EGRXT}_{t-1} + \sum \beta_5 \Delta \text{EGRXO}_{t-1} \\ & + \sum \beta_6 \Delta \text{NIFR}_{t-1} + \sum \beta_7 \Delta \text{ECM}_{t-1} + \varepsilon_t \dots (4) \end{aligned}$$

where β_2 , β_3 , β_4 , β_5 and β_6 represent the short-run parameters while the γ_1 , γ_2 , γ_3 , γ_4 , γ_5 , γ_6 denote the long-run parameters and β_7 represents the error correction mechanism which also speed of adjustment of disequilibrium in previous period to restore equilibrium in current period.

A priori Expectations

The apriori expectation refers to the anticipated direction of the effect that independent variables have on the dependent variable. In this study, EGRXA, EGRXR, EGRXT, and EGRXO are expected to exert a positive influence on Nigeria’s economic growth, whereas NIFR is anticipated to have a negative effect. Symbolically, this can be represented as $\alpha_1, \alpha_2, \alpha_3, \alpha_4 > 0$ and $\alpha_5 < 0$.

Variables Measurement

Data on economic growth proxied by GDP growth and inflation rate were measured in percentage while government recurrent expenditure on agriculture, road construction, communication and other economic services were all measured in billions of Naira.

4.0: Results and Discussion

Unit Root Test

Table 1: Unit Root Result

Source: E-view Version 10.0 Output, 2025.

Time Series	ADF Statistics at level	Critical Value at		ADF Statistics at 1 st Diff	Critical Value at 1 st Diff		Stationary Status at 5%
		level	at		Diff	1 st	
NEGR	-3.244201	-3.60099	1% level	-10.8294	-4.1985	1% level	0
		-2.935	5% level		-3.52362	5% level	
		-2.60584	10% level		-3.1929	10% level	
EGRXA	-4.148049	-4.19234	1% level	-7.44824	-4.205	1% level	0
		-3.52079	5% level		-3.52661	5% level	
		-3.19128	10% level		-3.19461	10% level	
EGRXR	-2.727497	-4.19234	1% level	-8.23412	-4.205	1% level	-1
		-3.52079	5% level		-3.52661	5% level	

		-3.19128	10% level		-3.19461	10% level	
EGRXT	-4.439581	-4.1985	1% level	-5.21895	-4.1985	1% level	0
		-3.52362	5% level		-3.52362	5% level	
		-3.1929	10% level		-3.1929	10% level	
EGRXO	-4.218183	-4.19234	1% level	-6.89212	-4.205	1% level	0
		-3.52079	5% level		-3.52661	5% level	
		-3.19128	10% level		-3.19461	10% level	
NIFR	-4.025612	-4.1985	1% level	-6.55491	-4.205	1% level	0
		-3.52362	5% level		-3.52661	5% level	
		-3.1929	10% level		-3.19461	10% level	

Stationary result is reported in Table 1, that all the variables (NEGR, EGRXA, EGRXT, EGRXO and NIFR) are stationary at level; I(0) except EGRXR that is stationary at first difference I(1) at 5% level of significance. They result shows that the variables employed in the study are mixed order of integration which inform the use of ARDL.

ARDL Bound Test Results

Table 2: ARDL Bound Test Results

F-Bounds Test		Null Hypothesis: No levels relationship			
Test Statistic	Value	Signif.	I(0)	I(1)	
F-statistic	8.081588	10%	2.1	3	
K	5	5%	2.4	3.4	
		2.5%	2.7	3.7	
		1%	3.1	4.2	

Source: E-view Version 10.0 Output, 2025

Based on the results of the optimal lag selection, the ARDL Bound Test was employed to estimate the long-run relationship among the variables. The findings indicate the existence of a long-run relationship, as the F-statistic for co-integration (8.081588) exceeds all the critical values at both I(0) and I(1), as presented in Table 2.

ARDL Short Run Analysis

Table 3: ARDL Short Run Regression (Dependent Variable: NEGR)

ARDL Error Correction Regression				
Dependent Variable: D(NEGR)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(EGRXA)	-0.019288	0.007285	-2.647642	0.0130
DLOG(EGRXT)	0.022759	0.007241	3.143256	0.0038
DLOG(EGRXT(-1))	-0.005932	0.006188	-0.958542	0.3457
DLOG(EGRXT(-2))	-0.015075	0.005683	-2.652852	0.0128
LOG(EGRXR)	-0.010482	0.008250	-1.270584	0.2140
EGRXO	-0.000111	8.05E-05	-1.376057	0.1793
NIFR	-0.042520	0.031168	-1.364230	0.1830
CointEq(-1)*	-0.953254	0.115366	-8.262898	0.0000
R-squared	0.701793	Adjusted R-squared		0.667712
Durbin-Watson stat	2.373254			

Source: E-view Version 10.0 Output, 2025

The report of ARDL short run analysis is presented in Table 4.5 with the impact of estimated coefficients on dependent variable. The ECM result correctly signed with negative and significant impact on NEGR. This result is line with apriori expectation. This can be explained further that the speed of adjustment is 95% which implies that about 95% disequilibrium in previous period is restored into equilibrium current period. This speed is very fast and quick to restores any disequilibrium in short run to equilibrium in the long run.

Based on the behaviour of the estimated coefficients; it shows that independent variables have both positive and negative impact of on dependent variable. In other words, EGRXA and EGRXT have a negative and a positive significant impact on NEGR, respectively for the period under reviewed. EGRXT conformed with apriori expectation because is expected that rise in EGRXT should lead to rise in EGRXR while EGRXA did not conform with apriori expectation because is expected that rise EGRXA should lead to rise in NEGR but reverse is the case. To further illustrate this, 1% rise in EGRXA and EGRXT will lead to 2% fall and rise in NEGR in the short run, respectively. However, EGRXT, NIFR and EGRXO have a negative insignificant impact on NEGR, respectively with about 1% rise in EGRXT and NIFR will lead to 1% and 4% fall in NEGR, respectively while $\text{N} 1$ rise in EGRXO will lead to $\text{N} -0.000111$ fall in NEGR. On the final note in Table 4.5 is the coefficients of determination (R^2) measure the proportion of variability in the NEGR that is accounted for independent variables. The $R^2 = 0.701793$ presents a model that is positively strong between NEGR and independent variables. Therefore, the model is a good fit since about 70% of changes in the NEGR are due to changes in explanatory variables, while 30% of changes in the NEGR are due to influence of external factors not reflected in the model. Base on the rule of thumb, DW is 2.373254 which implies that there is no autocorrelation in model because the value is close to or around two approximately. By implication, the estimated parameters are valid and good for policy making.

Long-Run Estimation

Table 4: Long-Run Estimation Results (Dependent Variable: NEGR)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(EGRXA)	-0.034414	0.010285	-3.345945	0.0023
LOG(EGRXR)	-0.010996	0.008624	-1.275139	0.2124
LOG(EGRXT)	0.055594	0.011278	4.929385	0.0000
EGRXO	-0.000116	8.13E-05	-1.430305	0.1633
NIFR	-0.044605	0.032275	-1.382047	0.1775
C	0.058917	0.012950	4.549422	0.0001

Source: E-view Version 10.0 Output, 2025

The Long run estimation is reported in Table 4.6 with the impact of EGRXA, EGRXR, EGRXT, EGRXO and NIFR on NEGR. The results show that EGRXA and EGRXT have a negative and a positive significant impact on NEGR, respectively with about 1% rise EGRXA and EGRXT on average will lead to 3% and 5% reduction in NEGR, respectively. On the other hand, EGRXR has a negative insignificant impact on NEGR with 1% rise in EGRXR on average will lead to about 1% fall in NEGR. Finally, on Table 4.6 contains negative insignificant impact of EGRXO and NIFR on NEGR with 1% rise in NIFR on average will lead to 0.4% reduction in NEGR while ~~N~~1 rise in EGRXO on average will lead to ~~N~~-0.000116 fall in NEGR.

Diagnosis Checks

Stability Test

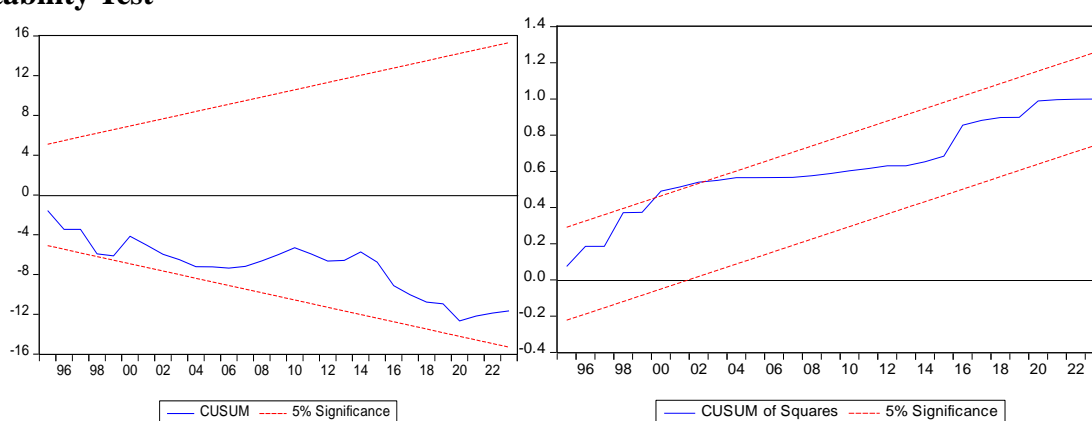


Fig 2: CUSUM and CUSUM of squares, Source: E-view Version 10.0 Output, 2025

Testing for stability of the model is very paramount to determine the validity of the parameters used in the study; it is on this CUSUM and CUSUM of squares are used to test for stability of the model which is reported in Fig 4.3; the plot of the CUSUM and CUSUM of squares statistics for the ARDL model reveal that CUSUM and CUSUM of squares stay within the critical 5% bounds which show the stability of the ARDL model over the period of investigation. The result of ARDL can be relied upon and good for policy making. The result also informs us that there is no structural break for the period under review.

Residual Diagnostic Check

Table 5: Residual Diagnostic Check

Test Statistics	Assumption	Probability
Breusch-Godfrey	Serial Correlation	0.2419

Breusch-Pagan-Godfrey	Heteroskedasticity	0.8862
Jarque Bera	Normal Distribution	0.2942

Source: E-view Version 10.0 Output, 2025

Autocorrelation heteroskedasticity, and normality tests are reported in Table 5 with insignificant probability values of 0.2419, 0.8862, and 0.2942, respectively. This reveals the absence of serial correlation heteroskedasticity, and non-normality assumptions suggesting that the estimated model is valid and useful for policy implication.

Discussion and Policy Implications

The results estimated are for both long run and short run with a view to provide policy makers with options to make appropriate decision for the overall performance of the economy either in short run and long run. Economics services of Government Recurrent Expenditure on agriculture (EGRXA) have negative significant impact on Nigeria economic growth (NEGR) both in the short run and the long run. In other words, increase in government recurrent expenditure on agriculture has not in any way improves economy activity either in long run or short run. Infact, the more government increase overhead expenditure on economics services, economic growth is retarded which does not conform with apriori expectation and the study of Ditimi, *et. al*; 2019 who discovered that government expenditure improves economy activities via agriculture but Chandana, Adamu & Musa (2020) finding revealed that government recurrent expenditure has no significant impact on NEGR. This could be as result of corruption and embezzlement of public funds by government officials and wrong or poor implementation of government policies.

However, government recurrent expenditure on road and construction (EGRXR) has a negative significant impact on NEGR in both short run and long run. This implies that increase in government recurrent expenditure on economic services has negative influence on the economy which should have positive impact on the economy. This does not confirm with apriori expectation that government spending on economic services promote growth. This finding is line with Aremu, *et al*; 2020, Chandana *et al*; 2020 and Onifade, *et al* (2020) but Ditimi *et. al*; 2019 but has contrary result.

Furthermore, Economics services of Government Recurrent Expenditure on transport and communication (EGRXT) has positive significant and significant impact on NEGR in short run and long run respectively. The finding conform with apriori expectation in both in short run and the long run with a view that if government increases overhead spending on communication will

result to positive impact significant impact on economic activities both in the short run and the long run through payment of workers' salaries and staff training because investment in human capital through training will improve productivity of workers and also have multiplier effect on economy because workers will be empowered through wages and salaries received to buy goods and services from other sectors of the economy. The finding collaborates Ditimi, *et. al*; 2019 and Iheanacho, 2016 and Aremu, *et al*; 2020 have opposite view.

Additionally, Economics services of Government Recurrent Expenditure on other economics services (EGRXO) has negative insignificant impact on NEGR both in short run and long run. This is one of the components of government recurrent expenditure on economics that its impact neither felt significantly both in short run or long run. Government investment on EGRXO government overtime has no meaningful impact on the economy. This also could be possible due corruption and embezzlement that have eaten deep into the system. This finding was supported by Chandana, *et.al*, 2020.

Finally, Nigeria inflation rate (NIFR) has negative insignificant impact on NEGR in short run and long run. This implies that low inflation rate will improve economic growth. Even though, there is increase in government expenditure for long period of time, in the presence of high inflation, purchasing power will be reduced and eventually, growth will be retarded which does agree with theoretical justification that low inflation promotes growth.

Conclusion and Recommendations

The study concluded that the increase in government economic services and recurrent expenditure on agriculture over time have not translated into economic growth. In a situation where proper monitoring and adequate attention are not given in the way and manner in which government resources are allocated to the sector, the situation becomes worrisome, and there is a tendency for embezzlement and misappropriation of resources by government officials that will eventually retard growth. Furthermore, economic services of government recurrent expenditure on road construction (EGRXR) and economic services of government recurrent expenditure on other economic services (EGRXO) have not been effective over the period under investigation, which calls for the government to exercise caution before pumping more funds into this particular sector. Finally, the study concluded that government expenditure has a significant impact on Nigeria's economic growth, and the economic services of government recurrent expenditure on communication (EGRXT) is the most productive and effective component of

government recurrent economic services expenditure, with a positive and significant impact on Nigeria's economic growth (NEGR) in both the short and long run.

Recommendations

The following are recommended base on the findings:

- i. Government through budget and allocation office should deliberate allocate more resources for recurrent expenditure on economics services on agricultural sector with a view to strengthen the productive activities in the sector and every resource allocated to the sector should be monitored and accounted for.
- ii. Government spending on recurrent expenditure on communication should be sustained and increased in order to enhance productivity.
- iii. Government through ministry of budget and economic planning should supervise and scrutinize every activity under the ministry of works especially on road construction and cut excessive spending in the sector.
- iv. Government through ministry of budget and economic planning should cut recurrent expenditure on economics services on other economics services and channel such unproductive expenditure towards agricultural sector and road construction sector in order to enhance movement of agricultural products from rural areas to where the products are needed.

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