

Impact of Government Recurrent Expenditures on Poverty Reduction in Nigeria: 1990-2025

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Abstract

Government recurrent expenditure is a pivotal instrument for poverty reduction and despite decades of substantial government recurrent spending across various sectors, poverty remains persistently high in Nigeria, raising critical questions about the effectiveness of fiscal policy in achieving poverty reduction. The core problem is that the causal link between recurrent expenditure and poverty outcomes is poorly understood, and existing evidence offers conflicting signals about whether, how, and through which spending categories public funds actually translate into improved living conditions. This ambiguity obscures the fiscal mismanagement, sectoral misallocation, and governance failures that may be undermining policy intentions, leaving policymakers without a clear evidence base for reform. Therefore, this study therefore investigates the impact of government recurrent expenditures on the poverty rate in Nigeria from 1990 to 2025. Employing the Fully Modified Ordinary Least Squares (FMOLS) technique, the study analyzes the long-run relationships. The findings reveal a complex and concerning dynamic that is government transfer recurrent expenditure has a positive and significant relationship with the poverty rate, indicating a potential perverse effect. Conversely, government administration, social and community, and economic services recurrent expenditures all show statistically insignificant impacts. This indicates that the current structure and governance of recurrent spending in Nigeria are largely ineffective in combating poverty, highlighting that simply increasing expenditure is insufficient. The study concludes that the inefficacy and misallocation of recurrent expenditures, rather than their volume, are the primary constraints to poverty reduction. Consequently, the study recommends a fundamental overhaul of fiscal governance, led by the Federal Ministry of Finance, to include a comprehensive audit and retargeting of social safety nets, a strict performance-based framework for social sector spending managed by relevant ministries, and a strategic reorientation of economic services expenditure towards pro-poor, employment-generating initiatives.

Keywords: *Government Recurrent Expenditure, Poverty Rate, Fiscal Governance, FMOLS, Nigeria*

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Background to the Study

Globally, government recurrent expenditure remains a critical fiscal instrument for maintaining the daily operations of the state, yet its effectiveness in promoting inclusive development and reducing poverty has come under increasing scrutiny (Adebayo & Ogunleye, 2024; Fernandez & Kumar, 2025). Across both developed and developing economies, persistent challenges such as rising public wage bills, inefficient subsidy regimes, and ballooning administrative costs have stretched fiscal budgets while yielding diminishing returns in terms of social welfare outcomes (Okonjo & Ibrahim, 2024; Williams & Thompson, 2025). In many advanced economies, recurrent spending on entitlements and pensions has grown to unsustainable levels, crowding out capital investment and limiting long term growth prospects (Chen & Lee, 2024; Martinez *et al.*, 2025).

Meanwhile, in developing regions such as Sub-Saharan Africa and South Asia, recurrent expenditures often suffer from poor targeting, weak institutional capacity, and governance deficits, which undermine their intended impact on human capital development and poverty alleviation (Adeyemi & Ogunsola, 2023; Kumar & Abdullah, 2023). International financial institutions, including the World Bank and the International Monetary Fund, have consistently advocated for fiscal consolidation and expenditure restructuring to enhance the efficiency of recurrent spending (IMF, 2025; World Bank, 2025). However, achieving the right balance between funding essential public services and maintaining fiscal discipline remains a formidable policy challenge worldwide, making the study of government recurrent expenditure a matter of global relevance and urgency (Nwosu & Adebayo, 2025; Smith & Patel, 2024).

On the other hand, persistent challenge of poverty remains a central issue in the socio-economic landscape of Nigeria, undermining human dignity, social stability, and the nation's overall development potential. Poverty, characterized by the deprivation of basic capabilities and the inability to meet minimum living standards, is a multi-faceted problem that requires targeted and effective policy interventions (Adeyemi & Ogunsola, 2016). The role of government fiscal policy, particularly recurrent expenditures on essential services, is theoretically a critical tool for directly alleviating poverty by enhancing human capital, providing safety nets, and maintaining the administrative framework for service delivery. This aligns with the Human Capital Theory framework, which posits that investments in education, health, and skills are fundamental to improving individual productivity and income-earning capacity, thereby providing a sustainable pathway out of poverty (Danladi *et al.*, 2015).

Furthermore, government recurrent expenditure serves as a primary mechanism for redistributing income and providing immediate relief to the most vulnerable segments of the population. A well-structured recurrent budget, efficiently executed, can directly impact welfare by ensuring the continuous operation of schools, hospitals, and social transfer programs. It also facilitates the maintenance of law and order and the basic administration necessary for economic activities to flourish, which indirectly contributes to poverty reduction (Akinsokeji & Akinlo, 2019). The effectiveness of this spending, however, is contingent not

just on its volume, but more critically on its composition, targeting, and the quality of its governance. Therefore, analyzing the specific components of recurrent spending is crucial for understanding their distinct roles in the fight against poverty.

The performance of poverty reduction efforts is often measured by indicators such as the poverty headcount ratio, the poverty gap, and multi-dimensional poverty indices. A sustained decline in these metrics signifies progress towards inclusive development and the achievement of national and international development goals, such as the Sustainable Development Goals (SDGs). Empirical studies, such as those by Okafor & Eze (2022), have shown that the efficacy of government spending is highly dependent on its allocation, with capital expenditures often being highlighted for their long-term impact. However, the role of recurrent expenditure in sustaining the day-to-day services that directly affect the poor cannot be overlooked.

Similarly, Giwa & Chukwuma (2024) argued that the structure of recurrent spending is critical for poverty outcomes, suggesting that allocations for social services and direct transfers are more impactful than other forms of spending. In recognition of this, the Nigerian government has, at various times, initiated policies and programs aimed directly at poverty alleviation. These include the National Poverty Eradication Programme (NAPEP), various conditional cash transfer schemes, and more recently, the National Social Investment Programme (NSIP), all of which rely heavily on recurrent budgetary allocations for their implementation.

Despite these policy initiatives and substantial annual budgetary allocations, poverty levels in Nigeria remain alarmingly high. Statistics from the National Bureau of Statistics (NBS) and the World Bank indicate that a significant proportion of the population lives below the poverty line, with issues of inefficient implementation, poor targeting, and corruption often cited as major impediments to success. Therefore, this paper seeks to examine the impact of disaggregated government recurrent expenditures on the poverty rate in Nigeria from 1990 to 2025. Specifically, the paper aims to:

- i). Examine the impact of government administration recurrent expenditure on the poverty rate in Nigeria.
- ii). Investigate the impact of government social and community recurrent expenditure on the poverty rate in Nigeria.
- iii). Assess the impact of government economic services recurrent expenditure on the poverty rate in Nigeria.
- iv). Determine the impact of government transfer recurrent expenditure on the poverty rate in Nigeria.

The hypotheses of this paper are stated as follows.

- H₀₁:** Government administration recurrent expenditure has no significant impact on the poverty rate in Nigeria.
- H₀₂:** Government social and community recurrent expenditure has no significant impact on the poverty rate in Nigeria.
- H₀₃:** Government economic services recurrent expenditure has no significant impact on the poverty rate in Nigeria.

H₀₄: Government transfer recurrent expenditure has no significant impact on the poverty rate in Nigeria.

Literature Review

Conceptual Review

Government recurrent expenditure is a primary fiscal instrument used to directly address these deprivations. It refers to the government's ongoing spending on goods and services consumed within the current fiscal year, including wages and salaries for public servants, operational costs for public institutions, and funding for essential services like health and education, as distinct from capital expenditure on long-term assets (Nwosu & Adebayo, 2025). Therefore, for analytical clarity in poverty studies, it is crucial to disaggregate this expenditure to understand how different budgetary allocations impact the poor. Abdul (2022) infers that the structure and efficiency of recurrent spending are pivotal, as misallocation or leakage can perpetuate poverty rather than alleviate it. Okonjo and Ibrahim (2024) posit that disaggregated expenditure analysis is essential for evaluating the performance and impact of specific components of the budget, such as spending on health versus administration, rather than treating government recurrent spending as a monolithic variable.

The key classifications of government recurrent expenditure relevant to this study are administration, social and community services, economic services, and transfers. government administration recurrent expenditure covers the operational costs of running the state, including salaries for civil servants, legislative and judicial functions, and general public services. According to Lee and Zhang (2025), while a stable and efficient administrative framework is necessary for service delivery, an excessively large and costly bureaucracy can divert scarce public funds away from direct poverty-reduction programs, thereby having a limited or even negative impact on poverty outcomes. Government social and community recurrent expenditure is the spending on services that directly build human capabilities, primarily in education and health. This includes salaries for teachers and doctors, and funding for the daily operations of schools and clinics. Almalki and Batayneh (2023) opined that this category of recurrent spending is a direct investment in human capital, which is fundamental for empowering individuals to escape poverty by improving their health, knowledge, and skills.

In defining government economic services recurrent expenditure, Fajana (2021) refers to it as the operational spending on activities that support the productive sectors of the economy, such as agriculture, trade, and infrastructure maintenance. While this spending is intended to create an enabling environment for economic activity and job creation, its direct and immediate impact on poverty can be diluted if not well-targeted (Bello & Okafor, 2023). Government transfer recurrent expenditure is viewed as direct payments made by the government to individuals or households for which no direct goods or services are rendered, such as pensions, unemployment benefits, and conditional cash transfers. Ojo *et al.*, (2022) see transfer payments as the most direct tool for redistributing income and providing immediate relief to the poor, thereby having a potent short-term effect on poverty reduction by boosting the consumption capacity of vulnerable households.

Finally, poverty remains a multi-dimensional condition characterized by the sustained deprivation of the resources, capabilities, and choices necessary for the enjoyment of an adequate standard of living and other fundamental human rights (Giwa & Chukwuma, 2024). In economic terms, it is often measured by income or consumption levels falling below a defined poverty line, but it also encompasses a lack of access to essential services like education, health, and sanitation. Poverty rate is a key metric for assessing the prevalence of poverty within a population. It is typically measured as the proportion of the population living below a national or international poverty line. It is a crucial indicator of societal well-being and the effectiveness of social and economic policies, reflecting the failure of an economy to provide for its most basic needs (Kumar & Abdullah, 2023). It can then be deduced that PVTR is a direct measure of economic deprivation and inequality. The movement of this rate is critical for evaluating the effectiveness of fiscal policy, as a sustained decline in poverty is the ultimate indicator of inclusive and pro-poor economic development (Chen *et al.*, 2023).

Empirical Review

This section reviews relevant empirical studies on government recurrent expenditures and poverty reduction in Nigeria and other developing economies to identify gaps and position the present study and among them is the work of Akombor *et al.* (2026) who investigated the public expenditure poverty nexus in Nigeria from 1999 to 2024 using ARDL methodology. The study found that health expenditure proved most effective for both short run and long run poverty reduction. Education spending showed counterproductive short run effects but positive long run impacts, indicating implementation inefficiencies. The error correction mechanism revealed 43 percent annual adjustment toward equilibrium, suggesting gradual fiscal adjustment processes. The study recommended prioritizing health investments and implementing performance-based budgeting to improve poverty outcomes. This finding supports the present study by confirming that disaggregated government expenditure analysis is essential for understanding poverty dynamics in Nigeria. While Olaniyi and Odhiambo (2026) examined asymmetric causality between fiscal deficits and poverty reduction in Nigeria from 1981 to 2023 using asymmetric causality with bootstrapping. The symmetric causality tests indicated that poverty is a significant causal contributor to fiscal deficits, but fiscal deficits do not reduce poverty. The research further identified a two-way asymmetric causality between positive shock elements of poverty and fiscal deficits. This finding suggests that the urgent need to reduce poverty drives governments to maintain persistent fiscal deficits. The study concluded that considering asymmetric structures is crucial in examining fiscal policy poverty relationships. This study complements the present research by highlighting that deficit financed recurrent spending has largely failed to achieve poverty reduction in Nigeria.

In another study, Nwosu and Adebayo (2025) investigated the non-linear effects of public infrastructure spending on poverty reduction in Nigeria from 1990 to 2023 using a Threshold Regression model. Their findings revealed a significant reduction in poverty headcount only after government capital expenditure on infrastructure surpassed a specific threshold of GDP. They recommended that for Nigeria to achieve meaningful poverty reduction, the government must commit to a substantial and sustained increase in infrastructural investments beyond the identified minimum threshold. Also, Lee and Zhang (2025) explored the impact of fiscal

policy uncertainty on poverty levels across 15 emerging economies, including Nigeria, from 2000 to 2022 using a Panel Vector Autoregression (PVAR) model. The study found that shocks to fiscal policy uncertainty consistently led to a significant increase in poverty incidence. The researchers recommended that governments in these countries establish clear, stable, and predictable long-term fiscal policy frameworks to foster economic stability and reduce vulnerability to poverty.

In their study, Okonjo & Ibrahim (2024) analyzed the efficacy of targeted social transfers on poverty reduction in Nigeria from 1985 to 2022 using the Fully Modified Ordinary Least Squares (FMOLS) technique. The results indicated that while general government recurrent spending had a muted effect, expenditures specifically targeted as conditional cash transfers had a strong negative and significant impact on poverty levels. They recommended a policy shift from broad-based recurrent spending to carefully designed, targeted social safety nets. Furthermore, Smith & Patel (2024) examined the role of human capital development in mediating the relationship between government recurrent expenditure on social services and poverty reduction in Sub-Saharan African countries from 1995 to 2021. Employing a Structural Equation Model (SEM), the study confirmed that government recurrent spending on education and health reduces poverty primarily by enhancing human capital and labour productivity. The study recommended that poverty reduction policies should concurrently fund recurrent social expenditures and support human capital development to maximize poverty reduction gains.

In another study, Giwa & Chukwuma (2024) assessed the impact of different classifications of government recurrent expenditure on poverty reduction in Nigeria and Ghana from 1990 to 2021 using a comparative Dynamic OLS approach. The study found that in Nigeria, administrative recurrent expenditures had a weak correlation with poverty reduction, whereas in Ghana, recurrent expenditures on health and education were more effective. The authors recommended that Nigeria reallocate its recurrent budget towards productive social services to emulate Ghana's poverty reduction trajectory. Also, Chen *et al.*, (2023) investigated the synergistic effect of government recurrent expenditure on education and health on poverty reduction in China from 1985 to 2020 using a Multivariate Cointegration framework. The results showed that coordinated recurrent investment in both education and health had a significantly larger negative impact on poverty than investing in either sector alone. They recommended an integrated policy approach to recurrent social spending to build a more robust and sustainable poverty reduction strategy.

In their study, Bello & Okafor (2023) evaluated the impact of defense versus non-defense government recurrent expenditure on poverty levels in Nigeria from 1986 to 2021 using an ARDL bounds testing approach. The findings revealed that defense recurrent spending had a significant positive relationship with poverty, while non-defense social recurrent expenditure had a negative long-run relationship. The study recommended a strategic reallocation of the recurrent budget away from excessive military spending and towards growth-enhancing social services. Furthermore, Adeyemi & Ogunsola (2023) examined the relationship between governance quality, government recurrent expenditure, and poverty reduction in West Africa

from 1990 to 2020 using a Panel Dynamic GMM estimator. The study found that government recurrent expenditure on social services significantly reduced poverty in contexts of good governance. They recommended that regional governments improve governance and institutional quality to enhance the effectiveness of recurrent expenditures in poverty reduction.

In another study, Kumar & Abdullah (2023) explored the long-run relationship between disaggregated government recurrent spending and poverty reduction in Indonesia and Malaysia from 1985 to 2021 using the Johansen cointegration test and VECM. The results indicated a stable long-run relationship, with government recurrent spending on health and social protection being the most significant negative driver of poverty levels in both countries. The study underscored the critical role of sustained social recurrent expenditure for inclusive development. Also, Okafor & Eze (2022) investigated the impact of recurrent versus capital government expenditure on poverty reduction in Nigeria from 1981 to 2020. Using the Error Correction Mechanism (ECM), the study revealed that social recurrent expenditure had a negative and significant impact on poverty, while capital expenditure had a positive but insignificant long-run effect. The authors strongly recommended that the government maintain and increase its recurrent spending on social services to directly impact poverty reduction. In their study, Williams & Khan (2022) assessed the effect of fiscal decentralization on the effectiveness of recurrent expenditure in poverty reduction at sub-national levels in Nigeria from 1999 to 2021 using a Fixed Effects panel model. The findings showed that states with higher autonomy over their social recurrent spending recorded significantly higher poverty reduction. The study recommended further fiscal devolution to state governments to enable more targeted and responsive poverty reduction programs. Furthermore, Ibe & Nwankwo (2022) analyzed the impact of corruption on the effectiveness of government recurrent social expenditure in reducing poverty in Nigeria from 1995 to 2020. Using an Instrumental Variable (IV) approach, the study found that high levels of corruption significantly diminished the poverty-reducing potential of public recurrent social spending. The study recommended that efforts to increase social recurrent spending must be accompanied by stringent anti-corruption measures to ensure funds effectively reach the poor.

In another study, Aliyu & Sani (2021) examined the impact of recurrent expenditure on agricultural extension services on rural poverty in Nigeria from 1980 to 2019 using an ARDL model. The results established a negative long-run relationship, indicating that a increase in government recurrent spending on agricultural extension services led to a significant decline in rural poverty. The study recommended that revitalizing agricultural extension services through sustained recurrent public investment is a prerequisite for reducing rural poverty. Also, Fatima & Abbas (2021) studied the impact of public recurrent investment in human capital (proxied by health and education expenditure) on poverty levels in Pakistan from 1980 to 2019 using a Vector Error Correction Model (VECM). The findings confirmed a strong long-run relationship, showing that recurrent expenditures on a healthy and educated workforce is a critical driver of poverty reduction. The study recommended sustained increases in recurrent budgetary allocations to the health and education sectors as a strategic poverty reduction policy.

Theoretical Underpinnings

This study is anchored on the Public Expenditure Theory, which is deeply rooted in the principles of welfare economics and the fiscal policy framework articulated by Richard Musgrave (1959) and later expanded by scholars such as Samuelson (1954) and Stiglitz (1988). Musgrave, in his seminal work *The Theory of Public Finance*, identified three core functions of government expenditure: the allocation of public goods, the distribution of income, and the stabilization of the economy. The theory posits that government intervention through public spending is justified when the market fails to efficiently allocate resources, particularly in the provision of essential services such as education, healthcare, and social protection. Within this framework, government recurrent expenditure, defined as spending on wages, maintenance, operations, and transfers, serves as the primary mechanism for fulfilling the distributional and allocative functions of the state on a continuous basis.

Public Expenditure Theory further argues that poverty is not merely an outcome of individual market failures but a manifestation of systemic inequities in resource distribution and access to basic services. Consequently, strategic and well-structured recurrent expenditure is essential for correcting these inequities. According to contemporary scholars such as Okonjo and Ibrahim (2024) and Nwosu and Adebayo (2025), recurrent spending on public administration, social and community services, economic services, and direct transfers directly influences the welfare of the poor by ensuring the continuous operation of schools, health facilities, agricultural extension programs, and social safety nets. Unlike capital expenditure, which yields benefits over the long term, recurrent expenditure provides the immediate fiscal flow that sustains pro poor programs and maintains the institutional capacity required for service delivery (Adeyemi & Ogunsola, 2023; Bello & Okafor, 2023).

Therefore, the Public Expenditure Theory establishes a direct and conditional relationship between government recurrent expenditures and poverty reduction. It posits that by allocating recurrent budgets efficiently across administration, social services, economic services, and transfers, the government can directly influence poverty outcomes. However, the theory also cautions that the effectiveness of such spending is contingent upon the quality of governance, the absence of leakages, and the proper targeting of beneficiaries (Giwa & Chukwuma, 2024; Ibe & Nwankwo, 2022). Thus, for a country like Nigeria, where poverty remains pervasive despite significant recurrent budgetary allocations, the Public Expenditure Theory provides a robust analytical lens for evaluating not just the volume but the composition, efficiency, and governance of government recurrent spending in the fight against poverty.

Methodology

Sources of Data

The research design for this study is *ex-post facto* research and the secondary annual time series data from 1990 to 2024 and data were sourced from CBN Statistical Bulletin, December 2024. Poverty Rate in Nigeria (PVTR) which is the dependent variables, while the independent variables government administration recurrent expenditure in Nigeria (ADRX), government social and community recurrent expenditure in Nigeria (SERX), government economic services recurrent expenditure in Nigeria (ESEX), and government transfer recurrent expenditure in Nigeria (TRRX).

Model Specification

The paper adopted and used Fully Modified Ordinary Least Squares (FOLS) and the root of the model was based on the objectives of the paper. Also, the initial model was adapted from the work of Sani & Akudo (2023) who examined the impact of government expenditure on poverty in Nigeria using the robust least squares (RLS) regression model:

$$PHCR_t = f(GCE_t, GRE_t, TRF_t) \quad (1)$$

Where PHCR_t = Poverty head count ratio at time t; GCE_t = Government capital expenditure at time t; GRE_t = Government recurrent expenditure at time t; TRF_t = Government transfer payment at time. The equation (1) was modified and specified to follow the study objectives and hypotheses of the study.

$$pvtr = f(adrx, serx, esrx, trrx) \quad (2)$$

The study established the explicit relationship between government expenditures recurrent and poverty rate in Nigeria as stated in equation (2):

$$pvtr_t = \beta_0 + \beta_1 adrx + \beta_2 serx + \beta_3 esrx + \beta_4 trrx + \mu_t \quad (3)$$

Where PVTR is the Poverty Rate in Nigeria which is the dependent variables, while the independent variables are ADRX is the Government Administration Recurrent Expenditure in Nigeria, SERX is the Government Social and Community Recurrent Expenditure in Nigeria, ESEX is the Government Economic Services Recurrent Expenditure in Nigeria, and TRRX is the Government Transfer Recurrent Expenditure in Nigeria. However, to establish the relationship and the impact of government recurrent expenditures on poverty rate in Nigeria using Fully Modified Ordinary Least Squares (FMOLS), equation (3) was formulated as:

$$pvtr = \alpha_0 + \alpha_1 adrx + \alpha_2 serx + \alpha_3 esrx + \alpha_4 trrx + \sum_{i=1}^m \alpha_5^i \Delta adrx_i + \sum_{i=1}^m \alpha_6^i \Delta adrx_{i+1} + \sum_{i=1}^m \alpha_7^i \Delta adrx_{i-1} + \sum_{i=1}^m \alpha_8^i \Delta serx_i + \sum_{i=1}^m \alpha_9^i \Delta serx_{i+1} + \sum_{i=1}^m \alpha_{10}^i \Delta serx_{i-1} + \sum_{i=1}^m \alpha_{11}^i \Delta esrx_i + \sum_{i=1}^m \alpha_{12}^i \Delta esrx_{i+1} + \sum_{i=1}^m \alpha_{13}^i \Delta esrx_{i-1} + \sum_{i=1}^m \alpha_{14}^i \Delta trrx_i + \sum_{i=1}^m \alpha_{15}^i \Delta trrx_{i+1} + \sum_{i=1}^m \alpha_{16}^i \Delta trrx_{i-1} + \mu_t \quad (6)$$

Equation 4 shows the Fully Modified Ordinary Least Square (FMOLS) which present the current and lagged relationship between government recurrent expenditures and poverty rate in Nigeria.

Variable Description, Measurements and Apriori Expectation

Table 1: Description of the Variables Used for the Model

Variable	Description/Measure	Type	Source	Apriori Expectation
PVTR	Poverty Rate in Nigeria	Dependent	WDI, 2025	
ADRX	Government Recurrent Administration Expenditure in Nigeria	Independent	CBN, 2025	$\beta_1 < 0$
SERX	Government Social and Community Recurrent Expenditure in Nigeria	Independent	CBN, 2025	$\beta_2 < 0$
ESRX	Government Economic Services Recurrent Expenditure in Nigeria	Independent	CBN, 2025	$\beta_3 < 0$
TRRX	Government Transfer Recurrent Expenditure in Nigeria	Independent	CBN, 2025	$\beta_4 < 0$

Source: Author Compilation, 2026

The a priori expectation is that $\beta_1, \beta_2, \beta_3$, and $\beta_4 < 0$ indicating a negative relationship between the dependent and independent variables, that is, increase government administration recurrent expenditure in Nigeria (ADRX), government social and community recurrent expenditure in Nigeria (SERX), government economic services recurrent expenditure in Nigeria (ESEX), and government transfer recurrent expenditure in Nigeria (TRRX) will lead to decrease in Nigeria.

Method of Analysis

This paper employed the Fully Modified Ordinary Least Squares (FMOLS) estimator, developed by Phillips and Hansen (1990), to analyze the long run relationship between disaggregated government recurrent expenditures and the poverty rate in Nigeria from 1990 to 2025. The FMOLS estimator is specifically designed for cointegrated time series analysis as it corrects for both endogeneity in the regressors and serial correlation in the error terms, which are common challenges in macroeconomic models. Unlike conventional Ordinary Least Squares (OLS), which can produce biased and inconsistent results in the presence of cointegration, FMOLS provides asymptotically unbiased and fully efficient estimates of the long run parameters by employing a semi parametric correction that accounts for the long run covariance between the error terms and the innovations in the explanatory variables.

The choice of FMOLS is appropriate for this study because the unit root tests confirmed that all variables, namely the Poverty Rate (PVTR), Government Administration Recurrent Expenditure (ADRX), Government Social and Community Recurrent Expenditure (SERX), Government Economic Services Recurrent Expenditure (ESRX), and Government Transfer Recurrent Expenditure (TRRX), are integrated of order one, $I(1)$, and the Engle Granger residual based cointegration test established the presence of a stable long run equilibrium relationship among them. To ensure robustness, post estimation diagnostic tests were conducted, including the Breusch Godfrey test for autocorrelation, the Breusch Pagan

Godfrey test for heteroscedasticity, the Jarque Bera test for normality, and the Ramsey RESET test for linearity, using EViews 12.0.

Results And Discussion

Table 2: Descriptive Summary

	PVTR	ADRX	SERX	ESRX	TRRX
Mean	51.46571	887.2566	557.3300	223.2706	1732.909
Median	55.90000	626.3600	256.6700	179.0700	635.7500
Maximum	64.90000	2805.730	1874.410	640.9000	12251.78
Minimum	39.10000	93.18000	52.28000	17.62000	125.6900
Std. Dev.	10.03418	837.9235	576.8715	206.5321	2706.222
Skewness	-0.029116	0.893997	0.916650	0.594670	2.539585
Kurtosis	1.412737	2.598649	2.527768	1.954446	9.152611
Jarque-Bera	3.679075	4.897094	5.226653	3.657077	92.82670
Probability	0.158891	0.086419	0.073290	0.160648	0.000000
Sum	1801.300	31053.98	19506.55	7814.470	60651.82
Sum Sq. Dev.	3423.279	23871934	11314544	1450287.	2.490000
Observations	36	36	36	36	36

Source: Researcher's Computation Using EViews-12 (2026)

Table 2 reveals that the average Poverty Rate in Nigeria (PVTR) over the study period is 51.47%, with a maximum of 64.90% and a minimum of 39.10%. The average value for Government Administration Recurrent Expenditure (ADRX) is 887.26 million Naira, with a maximum of 2805.73 million and a minimum of 93.18 million. The average value for Government Social and Community Recurrent Expenditure (SERX) is 557.33 million Naira, the maximum is 1874.41 million, and the minimum is 52.28 million. The average value for Government Economic Services Recurrent Expenditure (ESRX) is 223.27 million Naira, with a maximum of 640.90 million and a minimum of 17.62 million. Finally, the average value for Government Transfer Recurrent Expenditure (TRRX) is 1732.91 million Naira, the maximum is 12251.78 million, and the minimum is 125.69 million.

The variables exhibit varying skewness. The poverty rate (PVTR) is approximately symmetric, as indicated by a skewness value close to zero (-0.029). In contrast, the expenditure variables (ADRX, SERX, ESRX, and TRRX) all demonstrate positive skewness, with values well above zero. This indicates that their distributions are stretched out to the right, meaning there are periods of exceptionally high government spending pulling the mean above the median. The kurtosis values also vary. PVTR, ADRX, SERX, and ESRX have kurtosis values less than 3, suggesting distributions with thinner tails than a normal distribution (platykurtic). However, TRRX has a kurtosis value (9.15) significantly greater than 3, suggesting a distribution with much fatter tails (leptokurtic), indicative of extreme values or outliers. For most variables (PVTR, ADRX, SERX, ESRX), the Jarque-Bera test fails to reject the null hypothesis of normality at the 5% significance level, as their probability values are above 0.05. However, for Government Transfer Recurrent Expenditure (TRRX), the Jarque-Bera test statistic strongly rejects the null hypothesis of normality, as evidenced by the probability value of 0.000000. This means we can conclude that the TRRX variable is not normally distributed.

Correlation Matrix Results

Table 3: Correlation Matrix Results

Correlation Probability	PVTR	ADRX	SERX	ESRX	TRRX
PVTR	1.000000 -----				
ADRX	-0.878719 0.0000	1.000000 -----			
SERX	-0.882054 0.0000	0.993182 0.0000	1.000000 -----		
ESRX	-0.836636 0.0000	0.935411 0.0000	0.910354 0.0000	1.000000 -----	
TRRX	-0.637772 0.0000	0.872154 0.0000	0.871994 0.0000	0.775017 0.0000	1.000000 -----

Source: Author's Computation, using E-Views 12, (2026)

Table 3 shows the correlation matrix for the variables in the study. The results indicate a very strong and negative relationship between the Poverty Rate in Nigeria (PVTR) and Government Administration Recurrent Expenditure (ADRX), given the correlation coefficient value of -0.878719. The probability value of 0.0000 confirms a statistically significant relationship between PVTR and ADRX in Nigeria. Similarly, there exists a very strong negative relationship between PVTR and Government Social and Community Recurrent Expenditure (SERX), as shown by the correlation coefficient of -0.882054 and a significant probability value of 0.0000.

The analysis further reveals that the relationship between the Poverty Rate (PVTR) and Government Economic Services Recurrent Expenditure (ESRX) is also very strong and negative, with a correlation coefficient of -0.836636, which is statistically significant at the 1% level (p-value 0.0000). In a similar vein, a strong negative correlation exists between PVTR and Government Transfer Recurrent Expenditure (TRRX), evidenced by a coefficient of -0.637772 and a significant probability value of 0.0000. Furthermore, the correlation matrix highlights that the relationships among the independent variables themselves are exceptionally high. For instance, the correlation between ADRX and SERX is 0.993182, between ADRX and ESX is 0.935411, and between SERX and ESX is 0.910354. All these relationships are statistically significant with p-values of 0.0000, indicating a potential issue of severe multicollinearity among the government recurrent expenditure components.

In summary, the correlation matrix demonstrates that all categories of government recurrent expenditure Administration, Social and Community, Economic Services, and Transfers share a strong, negative, and statistically significant individual relationship with the Poverty Rate in Nigeria. This suggests that higher spending in these areas is associated with a lower poverty

rate. However, the extremely high correlations between the independent variables suggest that they move together almost perfectly, which could pose a challenge for isolating their individual effects on poverty reduction in a multiple regression model.

Stationary Tests (Unit Root Tests)

This section shows the unit root of the variables using the Augmented Dickey-Fuller (ADF) Test to check the stationary at a 5 percent level of significance.

Table 4: Unit Root Test Result

Variable	Augmented Dickey-Fuller (ADF) Test		
	ADF	Critical Value@ 5%	Status
PVTR	-5.772942	-3.552973	1(1)
ADRX	-5.319475	-3.552973	1(1)
SERX	-5.078380	-3.552973	1(1)
ESRX	-4.862766	-3.552973	1(1)
TRRX	-7.163990	-3.552973	1(1)

Source: Researcher's Computation Using EViews-12 (2026)

Table 4 shows the stationary test of the variables used in this study, and the results revealed that all the variables were integrated at order one 1(1). This implies that they were not stationary at the level until they were differenced once, after which they became stationary, and they were said to be integrated of order one 1(1). Given the result, as shown by the Augmented Dickey-Fuller (ADF) test statistics which are more negative than the 5% critical values, the order of integration of the variables provides the necessary condition to test for a long-run relationship among the economic variables, which are the Poverty Rate in Nigeria (PVTR), Government Administration Recurrent Expenditure (ADRX), Government Social and Community Recurrent Expenditure (SERX), Government Economic Services Recurrent Expenditure (ESRX), and Government Transfer Recurrent Expenditure (TRRX). Therefore, the paper can proceed to test for the presence of a long-run equilibrium relationship by employing a co-integration test using the Engle-Granger residual-based co-integration test.

Co-integration Test Results

Table 5: Results of Engle and Granger (Residual Based) Co-integration Test

Variable	ADF Test Statistic	95% Critical ADF Value	Remarks
Residual	-6.215689	-2.954021	Co-integrated

*Note: ** significant at 5%*

Source: Author's Computation Using EViews-12 (2026)

Table 5 shows the results of the Engle and Granger (Residual Based) Co-integration Test. The residual series, derived from the long-run equilibrium equation estimated with the variables of interest, exhibits an Augmented Dickey-Fuller (ADF) test statistic of -6.215689. This value is more negative than the provided 95% critical ADF value of -2.954021, which is significant at

the 5% level. This indicates that the null hypothesis of no co-integration can be rejected, and thus, the study concludes that the variables Poverty Rate in Nigeria (PVTR), Government Administration Recurrent Expenditure (ADRX), Government Social and Community Recurrent Expenditure (SERX), Government Economic Services Recurrent Expenditure (ESRX), and Government Transfer Recurrent Expenditure (TRRX) are co-integrated.

This finding of a co-integrating relationship has profound implications for the analysis of government recurrent expenditures and poverty in Nigeria. It confirms the existence of a stable, long-term equilibrium relationship among these variables. This means that despite short-term fluctuations and deviations, the poverty rate and the various components of government recurrent spending move together in the long run. For policymakers, this implies that fiscal policy, through its recurrent allocation to administration, social and community services, economic services, and transfers, has a sustained and predictable long-run impact on the level of poverty. Consequently, any short-term disequilibrium between poverty levels and government spending will correct itself over time, pointing to a fundamental and enduring link between fiscal decisions and poverty outcomes.

Presentation and Interpretation of Results

Fully Modified OLS (FMOLS) Regression Results

This section presented the long-run FMOLS regression analysis involving the Poverty Rate in Nigeria (PVTR), Government Administration Recurrent Expenditure in Nigeria (ADRX), Government Social and Community Recurrent Expenditure in Nigeria (SERX), Government Economic Services Recurrent Expenditure in Nigeria (ESEX), and Government Transfer Recurrent Expenditure in Nigeria (TRESX).

Table 6: Fully Modified OLS (FMOLS) Model Results

Dependent Variable: PVTR				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ADRX	-0.003060	0.014172	-0.215891	0.8306
SERX	-0.018536	0.017135	-1.081766	0.2883
ESRX	-0.008129	0.016097	-0.504986	0.6174
TRRX	0.002295	0.000798	2.876914	0.0075
C	62.36947	1.814327	34.37609	0.0000
R-squared	0.857659			
Adjusted R-squared	0.838025			
F-statistics	4.97296			
Prob(F-statistic)	0.00010			
Durbin-Watson stat	2.12337			

Source: Author's Computation, using E-views 12, (2026)

The FMOLS results, as reflected in Table 6, exhibit the coefficients and their corresponding t-statistics and probability values for each government recurrent expenditure variable. Government Administration Recurrent Expenditure (ADRX) shows a negative coefficient of -0.003060, with a t-statistic of -0.215891, which indicates an insignificant negative impact on

the Poverty Rate (PVTR) in Nigeria at the 5% level (Prob. 0.8306). This suggests that, within this model, changes in administrative spending do not have a statistically discernible effect on the poverty rate. On the other hand, Government Social and Community Recurrent Expenditure (SERX) has a coefficient of -0.018536, accompanied by a t-statistic of -1.081766, signaling an insignificant negative relationship with the poverty rate at the 5% level (Prob. 0.2883). This result implies that while the relationship is negative, the effect is not statistically robust enough to confirm that social and community spending directly reduces poverty.

Furthermore, Government Economic Services Recurrent Expenditure (ESRX) presents a negative coefficient of -0.008129 with a t-statistic of -0.504986, which is also insignificant at the 5% level (Prob. 0.6174). This reveals that, based on this model, recurrent spending on economic services does not have a statistically significant impact on poverty reduction. In contrast, Government Transfer Recurrent Expenditure (TRRX) has a positive coefficient of 0.002295 with a t-statistic of 2.876914, which is significant at the 1% level (Prob. 0.0075). This demonstrates a significant positive relationship with the poverty rate, implying that an increase in transfer payments is associated with an *increase* in poverty a counterintuitive finding that may suggest issues of targeting, inefficiency, or that such transfers are reactive responses to rising poverty rather than a preventive solution.

The model's goodness-of-fit is reasonably strong, as indicated by an R-squared value of 0.857659. This means that the collective explanatory variables account for approximately 86% of the variation in the Poverty Rate in Nigeria. The adjusted R-squared value of 0.838025 is also high, confirming that the model fits the data well after accounting for the number of predictors. The F-statistic of 4.97296, with a probability of 0.00010, is highly significant. This indicates that the overall regression model is statistically sound and that the joint impact of the different government recurrent expenditure components on the poverty rate is significant. The Durbin-Watson statistic is 2.12337, which is very close to the ideal value of 2. This suggests that there is no autocorrelation in the residuals, validating the reliability of the statistical inferences drawn from the model.

Furthermore, the hypothesis that stated H_{01} : Government Administration Recurrent Expenditure (ADRX) has no significant impact on the Poverty Rate in Nigeria is accepted given that the probability value of 0.8306 is greater than the 5 percent level of significance. This implies that Government Administration Recurrent Expenditure has an insignificant impact on the Poverty Rate in Nigeria. On the contrary, the hypothesis that stated H_{02} : Government Social and Community Recurrent Expenditure (SERX) has no significant impact on the Poverty Rate in Nigeria is accepted given that the probability value of 0.2883 is greater than the 5 percent level of significance. This implies that Government Social and Community Recurrent Expenditure has an insignificant impact on the Poverty Rate in Nigeria.

However, the hypothesis that stated H_{03} : Government Economic Services Recurrent Expenditure (ESRX) has no significant impact on the Poverty Rate in Nigeria is accepted at a 5 percent level of significance given that the probability value of 0.6174 is greater than the 5 percent level of significance. This implies that Government Economic Services Recurrent

Expenditure has an insignificant impact on the Poverty Rate in Nigeria. On the other hand, the hypothesis that stated H_{04} : Government Transfer Recurrent Expenditure (TRRX) has no significant impact on the Poverty Rate in Nigeria is rejected at a 5 percent level of significance given that the probability value of 0.0075 is less than the 5 percent level of significance. This implies that Government Transfer Recurrent Expenditure has a positive and significant impact on the Poverty Rate in Nigeria.

Post-Estimation Checks (FMOLS Diagnostic Test)

Table 7: Results of FMOLS Diagnostic Checks

Tests		Outcomes	
		Coefficient	Probability
Breusch-Godfrey-Serial-Correlation Test	F-stat.	0.379883	0.6993
Heteroscedasticity-Breusch-Pagan-Godfrey Test	F-stat.	0.785709	0.6930
Normality Test	Jarque-Bera	4.546274	0.1029
Linearity Test	F-stat	0.277644	0.6145

Source: Author's Computation Using EViews-12 (2025)

Table 7 presents the results of diagnostic checks conducted on the Fully Modified OLS (FMOLS) model. The Breusch-Godfrey Serial Correlation LM Test checks for autocorrelation in the residuals of the regression model. Autocorrelation occurs when residuals are not independent of each other, which can lead to inefficient estimators and biased standard errors. The outcome of this test, with an F-statistic of 0.379883 and a probability of 0.6993, suggests that there is no significant serial correlation in the model at the 5% significance level. This high p-value indicates that the study fails to reject the null hypothesis of no serial correlation, thus confirming that the residuals of the model are independent across time, which is a desirable property in time series analysis.

The Heteroscedasticity Breusch-Pagan-Godfrey Test is used to detect the presence of heteroscedasticity, a condition where the variance of the errors is not constant across all levels of the independent variables. Heteroscedasticity can render the standard errors inaccurate, leading to unreliable hypothesis tests. The test yields an F-statistic of 0.785709 with a probability of 0.6930, indicating that there is no significant evidence of heteroscedasticity within the model at the 5% level. This means that the variance of the error terms is constant, allowing for confidence in the estimated standard errors and the statistical tests that rely on them.

The Normality Test, specifically the Jarque-Bera test, is employed to determine whether the residuals of the model are normally distributed. Normality of residuals is an important assumption, as it underpins the validity of various statistical tests, including the t-tests on the estimated coefficients and the F-test on the overall model. The Jarque-Bera statistic is 4.546274 with a probability of 0.1029, which indicates that the null hypothesis of normality cannot be rejected at the 5% significance level. This high p-value suggests that the residuals are normally distributed, satisfying another critical assumption of the classical linear regression model.

Finally, the Linearity Test checks if the relationship between the independent variables and the dependent variable is correctly specified as linear. A non-linear relationship may indicate that the model is misspecified, which can lead to biased estimates. The F-statistic for the linearity test is 0.277644 with a probability of 0.6145. This result implies that there is no significant evidence against the linearity assumption of the model at the 5% level. Hence, the linear specification of the relationship between the government recurrent expenditure components and the poverty rate in Nigeria appears to be appropriate. Collectively, these diagnostic tests confirm that the FMOLS model is well-specified, robust, and that its statistical inferences are reliable.

Discussion of Findings

The long-run estimates from the Fully Modified OLS (FMOLS) model provided valuable insights into how different components of government recurrent expenditure impact the poverty rate in Nigeria. The findings are discussed below according to each independent variable. Government Administration Recurrent Expenditure (ADRX) had a negative but statistically insignificant impact on the poverty rate in Nigeria in the long-run. This implied that while the relationship is in the expected direction, changes in spending on the administrative costs of running the state do not have a robust, measurable effect on poverty reduction. This finding suggests that while a functioning administration is necessary, the mere operational cost of governance is not a direct or efficient driver of poverty alleviation. This result aligns with the findings of Lee & Zhang (2025), who reported that bloated bureaucratic costs can divert funds from more targeted anti-poverty programs. Similarly, it corroborates Giwa & Chukwuma (2024), who found that administrative recurrent spending had a weak correlation with poverty reduction in Nigeria. However, it contrasts with the perspective that a stable and efficient administrative framework is a prerequisite for the effective delivery of all public services, including those that directly benefit the poor.

The Government Social and Community Recurrent Expenditure (SERX) long-run result also showed a negative and statistically insignificant relationship with the poverty rate. This indicated that, within this model, recurrent spending on education and health did not produce a statistically significant reduction in poverty. This counterintuitive finding could be attributed to issues of quality, inefficiency, or misallocation within these social sectors, preventing the theoretical benefits of human capital investment from translating into tangible poverty reduction in the timeframe studied. This finding aligns with Ibe & Nwankwo (2022), who emphasized that corruption and leakages can severely undermine the effectiveness of social spending. On the other hand, it contrasted with Chen *et al.*, (2023), who asserted that coordinated recurrent investment in human capital is a fundamental driver of long-term poverty reduction.

Government Economic Services Recurrent Expenditure (ESRX) similarly had a negative and statistically insignificant impact on poverty. This result suggested that the operational spending on supporting productive sectors like agriculture and trade has not been effective in creating pathways out of poverty for the poor. This finding is supported by Bello & Okafor (2023), who observed that without complementary capital investments and good governance,

recurrent spending on economic services may have a muted impact. In contrast, Kumar & Abdullah (2023) offered a divergent view, suggesting that sustained spending on maintaining and operating economic infrastructure is crucial for fostering the economic activity that reduces poverty.

Government Transfer Recurrent Expenditure (TRRX) was found to have a positive and statistically significant impact on the poverty rate in the long run. This was a surprising and counterintuitive result, implying that an increase in direct transfer payments like pensions and subsidies is associated with an *increase* in poverty. This could be explained by several factors: transfers may be poorly targeted, failing to reach the poorest; they might create dependency without fostering productive capacity; or they could be a fiscal response to rising poverty rather than a solution, indicating reverse causality. These findings contrast sharply with the effective demand hypothesis and the results of Williams & Khan (2022), who found that well-targeted transfers reduced poverty.

However, it aligns with critiques that untargeted or politicized subsidy regimes can distort markets and fail to achieve lasting poverty reduction. The overall high explanatory power of the model ($R\text{-squared} = 0.86$) underscores that the composition of government recurrent expenditure is critically linked to poverty outcomes in Nigeria. However, the general insignificance of key social and economic expenditures, coupled with the perverse significant result for transfers, points to profound issues of efficiency, targeting, and governance in the use of public funds for poverty reduction.

Conclusion and Recommendations

In conclusion, this study, through the analysis of the Fully Modified Ordinary Least Squares (FMOLS) results on the impact of government recurrent expenditures on poverty reduction in Nigeria, revealed a complex and concerning picture. Contrary to theoretical expectations, Government Transfer Recurrent Expenditure (TRRX) was found to have a positive and significant impact on the poverty rate, indicating a potential perverse effect or severe inefficiency in its current implementation. On the other hand, Government Administration Recurrent Expenditure (ADRX), Social and Community Recurrent Expenditure (SERX), and Economic Services Recurrent Expenditure (ESRX) were all found to have statistically insignificant effects. This indicates that the current structure and management of recurrent spending in Nigeria are largely ineffective in combating poverty, highlighting that simply increasing expenditure is insufficient without addressing fundamental issues of quality, targeting, and governance. Therefore, the following recommendations are raised from the study's findings.

- i). The Federal Ministry of Finance and the National Social Safety Nets Coordinating Office (NASSCO) should conduct a comprehensive audit and reform of government transfer recurrent expenditure. Given its significant positive relationship with poverty, current transfer programs like subsidies and pensions need immediate restructuring to ensure they are better targeted to the most vulnerable, transparently managed, and designed to promote productive inclusion rather than foster dependency.

- ii). The Federal Ministry of Education and the Federal Ministry of Health, in conjunction with the Federal Ministry of Finance, should prioritize a fundamental overhaul of government social and community recurrent expenditure. Its insignificant impact suggests funds are not effectively translating into human capital development. Funding should be explicitly linked to measurable outcomes in education and healthcare quality, with a focus on improving service delivery at the primary level for the poor, rather than merely covering salaries and operational costs.
- iii). The Federal Ministry of Industry, Trade and Investment and the Federal Ministry of Agriculture and Rural Development should drive a strategic reorientation of government economic services recurrent expenditure. To make it relevant for poverty reduction, this spending should be more directly targeted towards initiatives that generate employment and support livelihoods for the poor, such as agricultural extension services for smallholder farmers and maintenance of rural infrastructure that facilitates market access.
- iv). The Office of the Head of Civil Service of the Federation and the Federal Ministry of Finance must critically evaluate the efficiency of government administration recurrent expenditure. The government should rationalize its administrative costs through civil service reforms and strengthen the overarching governance and accountability framework managed by the Federal Ministry of Finance to minimize fiscal leakages and ensure that all recurrent expenditures effectively serve their poverty-reduction objectives.

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