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Sectoral Government Expenditures and Economic Growth in Nigeria: Lessons for Developing Economies

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Abstract

This study looked at the combined impact of governmental administration, economic services, and social service spending on GDP growth in Nigeria from 1981 and 2023, taking exchange and inflation into consideration. The study used annual time-series data and autoregressive econometric techniques. The model's overall statistical significance ($p < 0.01$) indicates that the independent variables have a combined impact on GDP growth. Individual sector spending on public administration ($p = 0.91$), social services ($p = 0.95$), and economic services ($p = 0.69$) did not. The limited effectiveness of fiscal spending in the face of macroeconomic uncertainty is shown by the negative but statistically insignificant effects of inflation and exchange rate volatility ($p = 0.17$ and $p = 0.92$). Diagnostic tests were used to verify the model's resilience. The Breusch-Pagan-Godfrey test revealed no heteroskedasticity ($p = 0.11$), however the Breusch-Godfrey LM test revealed a small autocorrelation ($p = 0.05$). The results were more credible because the variance inflation components did not exhibit multicollinearity. Complementary SWOT and PESTEL analyses uncovered internal weaknesses including fiscal inefficiencies and inconsistent policies, in addition to external risks like oil price shocks and market volatility. The research may not adequately reflect the institutional and policy implementation variables influencing economic development since it mostly relies on secondary data. The analysis concludes that the country has been unable to produce sustainable growth due to inefficiency and a weak institutional structure. It recommends that expenditures be tightly matched with sectors that boost productivity, executed by ethical companies, and publicly tracked.

Keywords: Administration, Social Services, Economic Services Expenditures, GDP Growth, Inflation, Exchange Rate, Nigeria, Developing Economies

Introduction

Worldwide, government spending is a crucial fiscal policy tool that affects the macro economy. In a number of settings, researchers have demonstrated the relationship between government expenditures and growth in the economy. The market collapse of the 1920s is the driving force behind the emphasis on using government funding as a way to boost economic growth [1]. According to neo-classical economists, the crowding-out effect—which diminishes the private sector's contribution to the economy is crucial since it lowers inflation [2,3]. They contend that a rise in public debt causes interest rates to rise, which in turn lowers inflation and output.

In response, the new Keynesians argue that more government spending will boost demand and quicken economic growth by citing the multiplier effect [4]. Most modern economists agree that there are circumstances in which lower levels of national spending would encourage economic growth and others in which larger levels of public spending are desirable [2,5]. Government expenditure will inevitably increase in scope and scale as economies grow in order to fulfill growing social and infrastructural demands, according to Wagner's Law of Expanding State Activity [6]. Furthermore, the endogenous growth theory highlights the need of public investment in human capital, infrastructure, and innovation as key factors influencing GDP growth and long-term productivity [7].

Many Sub-Saharan African nations have had difficulty turning growing public spending into long-term growth. Even with increased spending on social services, infrastructure, health care, and education, growth is frequently slow, and

many countries continue to struggle with poor governance, unstable external shocks like shifting commodity prices, and inadequate infrastructure. Nigeria's recent macroeconomic changes, for instance, have improved some fiscal positions and growth rates in 2024, according to World Bank reports; but, issues like inflation and currency instability still limit the full benefit of government spending on growth [8].

Nigeria presents a particularly strong argument for examining sectoral government spending at the local level. This time frame, which spans 1981–2023, encompasses recent attempts at macroeconomic stabilization, oil price shocks, democratic transitions, structural adjustment, and fiscal reforms. The scope and complexity of Nigeria's government spending have increased during this time. Different patterns of capital and ongoing expenditure have been observed in the following areas: administration (general administration), defense, internal security, national assembly, social services (health and education), and economic services (agriculture, roads and construction, and transportation and communication). However, whether or not this increased spending has resulted in proportionate increases in economic growth is a topic of much discussion and empirical uncertainty. Many Nigerians claim that growth has not sufficiently improved important results like poverty reduction, quality healthcare, infrastructure delivery, or educational outcomes, even with increases in budgetary allocations.

This issue is further highlighted in recent studies. A 2023 study by Chima & Yusuf examined Nigeria's education spending (recurrent and capital) from 1980 to 2019 and found that while both forms of education spending positively affect GDP growth in the long and short term, inflation, the exchange rate and gross capital formation often moderate or retard growth [9]. Another 2024 study focused on government expenditure, inflation, and growth from 1989–2021, and concluded that overall government expenditure and inflation are positive and significant for Nigeria's economic growth, recommending stabilisation of price [10]. A further article published in early 2025 assessed the impact of government capital expenditure (specifically machinery, education, and power sectors) over 1990–2023; it reported that while capital expenditure on machinery increases growth in the short run, its long-run effects are less consistent, though investments in education showed strong long-run growth impacts [11].

Given this mixed evidence, especially in recent years, there is a strong need for updated analysis that disaggregates government spending into major sectors (public administration, social services and economic services) to assess how each component has contributed to economic growth in Nigeria. The data from 1981 to 2023 may be used to record important policy cycles, oil shocks, structural discontinuities, and changes in measurement (e.g., GDP rebasing).

Statement of the Problem

For a resource-rich developing country like Nigeria, where nearly 75.5% of the population lives in relative poverty, where infrastructure is in a state of decay, where health, education, and other institutions that support growth and welfare are in a state of near-collapse, where the power sector is in a state of decay, where the rates of unemployment, illiteracy, and poverty (as demonstrated by the number of people living in shanties with little to no access to quality education, healthcare, potable water, etc.), where the human development index is steadily declining, etc. Government expenditure has been continuously increasing in spite of these problems. Therefore, one would anticipate that Nigeria's economic development would be equivalent, but this hasn't been the case.

This raises questions about whether Nigeria's spending structure can sustain long-term economic growth comparable to that seen in other developing nations, whether government resources are reaching the most promising industries for growth, and how productive and efficient the country's sectoral government expenditures are. The research hopes to provide significant insights into the relationship between resource management, economic growth, and transparency in Nigeria between 1981 and 2023.

Objectives of the Study

The specific objectives include to:

- Analyze how public administration expenditure affects Nigeria's GDP growth.
- Assess how social service expenditure affects Nigeria's GDP growth.
- Examine how economic services expenditure affect Nigeria's GDP growth.
- Examine the combined effect of expenditure on social services, public administration, and economic services on GDP growth in Nigeria while accounting for inflation and exchange.

Research Questions

The following research questions guided the study:

- What is the impact of public administration expenditure on GDP growth in Nigeria?
- What is the impact of social services expenditure on GDP growth in Nigeria?
- What is the impact of economic services expenditure on GDP growth in Nigeria?
- What is the joint impact of public administration, social services, and economic services expenditures on GDP growth in Nigeria while controlling for inflation and exchange rate?

Research Hypotheses

The following null hypotheses were formulated to guide the study:

- H₀₁: Public administration expenditure has no significant impact on GDP growth in Nigeria.
 H₀₂: Social services expenditure has no significant impact on GDP growth in Nigeria.
 H₀₃: Economic services expenditure has no significant impact on GDP growth in Nigeria.
 H₀₄: Public administration, social services, and economic services expenditures jointly have no significant impact on GDP growth in Nigeria when inflation rate and exchange rate are controlled for.

Review of Related Literature

Conceptual Literature

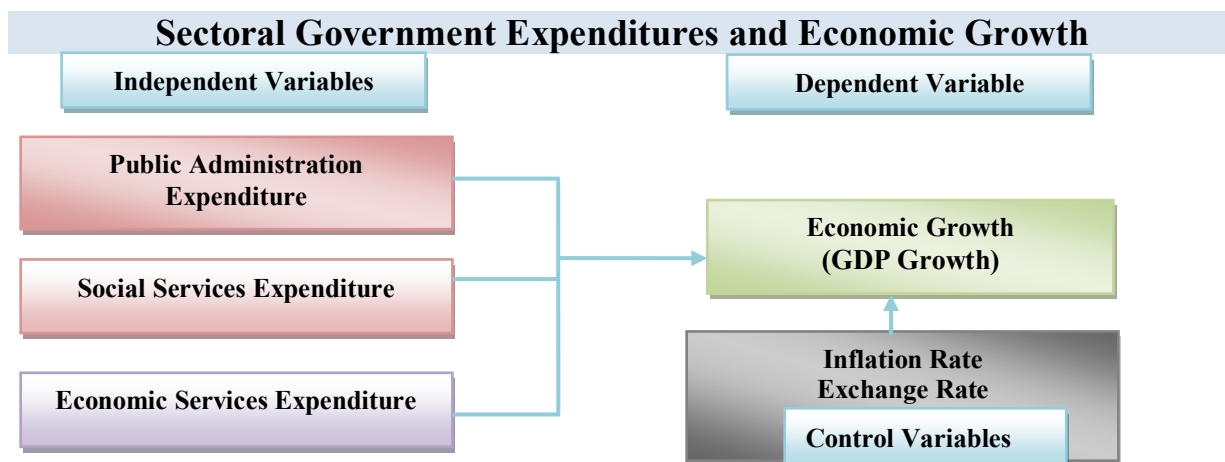


Figure 1: Author's Conceptual Model, 2026

Government Expenditure

Government expenditures are the expenses that municipal (local), state, and federal governments bear. In Nigeria, government spending is separated into two economic component categories, capital and recurrent expenditures, and four functional categories: administration, economic services, social and community services, and transfer payments [12]. Expenditure on specific economic sectors comprises each functional component. Recurrent expenditures are payments for transactions made within a year (day-to-day expenses like salaries, operations), whereas capital expenditures (investment in infrastructure, long-term projects) are payments for non-financial items utilised in the production process for more than a year [12].

Public Administration Expenditure

The costs incurred by the government in running its activities are referred to as public administration expenditures [13]. It encompasses spending on salaries and wages of public servants, administrative overheads of ministries and agencies, defense and internal security, and legislative functions [14]. These expenses are essential for upholding law and order, preserving government institutions, and promoting the creation and efficient application of policies [15]. Understanding the connection between governance and public spending is essential to comprehending how governments operate in contemporary democracies [16,17]. Efficient, transparent, and citizen-benefit-maximizing use of public monies is guaranteed by good governance procedures. Public trust, economic stability, and overall development results are shaped by this link.

Social Services Expenditure

One of the most important conditions for a stable and peaceful society is better economic well-being. However, in a developing economy, market failure is likely to occur if the duty of supplying the necessary components for improving economic prosperity is left to an institutional structure motivated by self-interest [18]. The distribution of government funds to different services and initiatives targeted at enhancing people's quality of life is represented by the social sector expenditures [19]. Spending by the social sector directly improves the quality of life for both people and communities [20,21]. Better health, more possibilities, and a higher quality of life can result from investments in human education, health care, and social welfare [22-24]. Additionally, expenditure in the social sector frequently targets marginalized and vulnerable groups, assisting in the reduction of social and economic disparities Ogunode et al. (2024) [25].

Economic Services Expenditure

Government spending on businesses that either directly produce goods or supply the infrastructure required for productive activity, such as transportation networks, extension services, building roads and bridges, telecommunications, and farm subsidies, is known as economic services expenditure. Notwithstanding government expenditure on roads and construction, Nigeria still has a serious infrastructure deficit. Since companies have to travel further to get raw materials to their facilities and completed items to clients, this has raised manufacturing costs for many enterprises [26].

Nigeria's economic growth has been hampered by the fact that many businesses have been compelled to reduce their output or even close entirely as a result of these increased costs. According to World Bank estimates, Nigeria will require

\$3 trillion in infrastructure investments to close its infrastructure deficit [27]. The road and construction sector has to deal with inadequate quality control, corruption, delayed building projects, and a lack of funds for better infrastructure in addition to bad and decaying roads [28].

This increase in investment in economic services is encouraged by Nigeria's recent fiscal expenditures. In order to increase connectivity and boost the economy, the Nigerian Federal Executive Council approved ₦4.2 trillion for road infrastructure projects, including bridges and highways, in 2025 [29]. The ₦41.49 billion set out in the 2025 budget for significant projects like rail maintenance further demonstrates the government's continued commitment to transportation infrastructure [30].

Economic Growth

Economic growth is characterized as increases in a country's potential GDP, albeit this differs depending on how the national product is measured [31]. For a developing economy to escape the cycle of poverty, economic development must be maintained. The gradual process by which the economy's productive capacity is raised over time to result in growing levels of national production and income is known as economic growth. But it's important to remember that growth only takes into account quantitative and quantifiable characteristics [32].

Inflation

A sustained increase in expenses that results in a decrease in currency values is known as inflation [33]. Instead of discrete price increases in certain commodities, this phenomenon is characterized by a broad and ongoing increase in the price level of the majority of goods and services over a protracted period of time [34]. Inflation rates have risen to levels not seen in decades and the world economy is experiencing an unexpected downturn, according to the International Monetary Fund's October 2022 World Economic Outlook [35]. Economic projections have been significantly influenced by a number of variables, such as difficulties with the cost of living, tighter financial conditions in many areas, Russia's invasion of Ukraine, and the partial COVID-19 pandemic [36].

Bangura and Omojolaibi (2024) observed that economic development in Nigeria has slowed down in the last two inflation categories, which are both quite high [37]. Using a single inflation benchmark of 12.88 percent, their analysis showed a non-linear link between inflation and economic growth. When inflation is below this threshold, economic growth is positively influenced; when it is beyond this threshold, it is negatively impacted. Furthermore, whereas greater trade openness has a negative effect on economic development, population growth has a positive impact on GDP under all inflation regimes. This implies that growth depends on maintaining inflation at a reasonable level and that Nigeria's economic performance is very vulnerable to inflationary pressures.

Exchange Rate

The foundation of exchange rate policy is the reality that nations throughout the world do not have equal resources. This implies that for the economy to function properly, goods and services must move freely across nations [38]. In every economy where imports outweigh exports, the exchange rate is crucial. A devalued local currency increases foreign exchange inflow and makes exports more affordable on the global market. But it also depletes available foreign exchange and raises the cost of imports [39]. Achieving a decent degree of exchange rate stability is one of the main goals of macroeconomic management. Price stability, more foreign direct investment, full employment, and balance of payments equilibrium will follow from this [40].

Theoretical Literature

Wagner's Law of Increasing State Activity, which was proposed in 1883 and maintains a steady and positive correlation between government spending and economic growth, serves as the study's major theoretical foundation. According to Adolph Wagner, when nations industrialize and experience protracted economic development, public sector activities expand proportionately to meet rising social, administrative, and infrastructure demands [41]. The idea contends that modernization and economic expansion increase the need for government involvement in sectors including infrastructure, healthcare, education, and administration, which eventually raises levels of public spending.

The concept fits in perfectly with the objectives of the present research, which looks at the link between Nigerian GDP growth and sectoral government spending. According to Wagner, more economic growth leads to greater financial obligations, especially in the areas of infrastructure development, human capital development, and public goods supply [42]. Therefore, increasing spending in the social and economic sectors should, in theory, boost output, encourage private investment, and have favorable knock-on effects that promote long-term economic growth.

Likewise developing nations might learn a lot from Nigeria's experience. Government expenditure has grown dramatically over time, yet its effect on GDP growth has not kept up [43]. The linear assumption of Wagner's Law is called into doubt since the developmental benefit of greater investment has been diminished by structural inefficiencies, financial leakage, and inadequate public accountability systems. Only lucrative and well-managed sectoral investments, especially in infrastructure, health, and education, produce notable economic gains, according to recent empirical research [16,17]. Large ongoing or administrative costs, however, might only result in modest growth returns.

Empirical Literature

Across nations and eras, empirical research on government spending and economic development has yielded conflicting and ambiguous findings. In order to emphasize important conclusions, methods, and gaps that support the current study, this section examines pertinent empirical literature.

Author(s) & Year	Study Focus / Context	Methodology	Key Variables	Major Findings	Relevance to Present Study
Ahuja & Pandit (2020)	Examined relationship between public spending and economic growth across 59 countries (1990–2019)	Panel data regression analysis	Government spending, GDP growth, trade openness, investment, inflation	Public spending positively influenced economic growth; investment and trade openness promoted growth	Supports examining sectoral government spending and economic growth
Onifade et al. (2020)	Impact of government expenditure on economic growth in Nigeria (1981–2017)	ARDL time series analysis	Capital expenditure, recurrent expenditure, GDP growth	Recurrent expenditure negatively affected growth; capital expenditure insignificant	Highlights need to assess sectoral expenditure impact
Mesfin & Tadewos (2020)	Government expenditure management at Oromia Police College	Survey and interviews	Budget planning, procurement, audit resources	Weak linkage between budget and work plan; inadequate audit support	Emphasizes efficiency of government expenditure
Chandan a et al. (2021)	Government capital and recurrent expenditure and economic growth in Nigeria (1970–2019)	ARDL model	Capital expenditure, recurrent expenditure, GDP growth	Capital expenditure positively influenced growth; recurrent expenditure insignificant	Supports sectoral expenditure evaluation
Udude et al. (2023)	Government spending on education and economic growth in Nigeria	ARDL and ex-post facto design	Education expenditure, defense, health, GDP	Education, defense, and health positively influenced growth	Supports role of social sector expenditure
Arawata ri et al. (2023)	Productive government spending and economic growth	Endogenous growth model	Government spending, GDP ratio	Inverted U-shaped relationship between spending and growth	Shows optimal government spending levels
Chima & Yusuf (2023)	Education spending and economic growth in Nigeria (1980–2019)	ARDL time series analysis	Education expenditure, inflation, exchange rate, GDP	Education and health spending improved growth; inflation reduced growth	Supports social sector expenditure relevance
Awusa (2023)	Monetary policy rate and government spending in Nigeria	OLS regression, ex-post facto design	Administrative spending, monetary policy rate, GDP	Monetary policy significantly moderated government spending impact	Shows role of macroeconomic controls
Joseph et al. (2024)	Government expenditure and economic growth in Nigeria	OLS multiple regression	Capital and recurrent expenditure, GDP	Government spending positively influenced growth	Supports government spending-growth relationship
Udo et al. (2024)	Public administration initiatives and economic growth	ARDL, ADF test	Governance index, corruption control, GDP	Public administration policies had insignificant impact on growth	Supports need to examine public administration expenditure
Nomor & Udele (2024)	Agricultural expenditure and economic growth in Nigeria (1981–2022)	Structural VAR model	Agricultural expenditure, agricultural output, GDP	Recurrent agricultural spending positively influenced output and growth	Supports economic sector expenditure
Ochieka (2025)	Government capital expenditure and economic growth in Nigeria (1990–2023)	ARDL model	Capital expenditure, education, power, GDP	Power investment promoted growth; education had weak impact	Supports sector-specific expenditure analysis

Table 1: Empirical Review

Source: Author's compilation from empirical literature (2020–2025).

The analyzed empirical research produced conflicting results about the connection between economic growth and government spending. While some studies indicated that government spending, notably in the areas of infrastructure, health, and education, has a beneficial impact on economic development, others found little or even detrimental benefits, particularly in recurring and administrative expenses. Furthermore, the majority of the examined research concentrated on total government expenditures without sufficiently breaking down spending into public administration, social services, and economic services. The diversity in results was also influenced by variations in research settings, time periods, and methodology. In order to close these gaps, this study looks at how sectoral government spending affects Nigeria's economic development over a long time span of 1981 to 2023.

Gap in Literature

The majority of earlier studies only used conventional regression and cointegration methods, which offer little insight into policy. The current analysis uses SWOT and PESTEL evaluations to address this utilizing a sectoral breakdown approach. Through the contextualization of sectoral expenditure in connection to institutional, environmental, and macroeconomic concerns, this dual strategy enhances comprehension of Nigeria's fiscal structure. Additionally, there is a contextual gap in how Nigeria's experience might be applied to other developing economies. Few studies have generalized their findings to broader regional implications or policy learning in emerging or African environments. In addition to filling methodological and empirical shortcomings, this research of Nigeria's sectoral expenditure patterns from 1981 to 2023 provides rising nations with policy-relevant insights on how to optimize sectoral allocation to support sustainable growth.

Material and Methods

Research Design

This study employed an ex post facto research methodology using historical secondary data to examine the relationship between dependent and independent variables.

Method of Data Analysis

E-Views was used to examine the data. To give a summary of the features of the variables, descriptive statistics including mean, median, maximum, minimum, and standard deviation were calculated. Trend analysis was used to show how sectoral government expenditure and economic growth changed over time. While stationarity was assessed using the Phillips-Perron and Augmented Dickey-Fuller unit root tests, multicollinearity was investigated using the Variance Inflation Factor and correlation analysis. Multiple OLS regression models adopted for the study while the Durbin-Watson and Breusch-Pagan/White tests were used for autocorrelation and heteroskedasticity diagnostics to verify the model's validity and robustness.

Swot and Pestel analytical methods were used to support the study's economic modeling. When combined, these analytical methods improve our comprehension of institutional capability, external limitations, and policy effectiveness, which benefits developing countries and improves the interpretation of quantitative data.

Empirical Model

The models are constructed to bolster the study's objectives and hypotheses as illustrated in table 1 below.

Model	Equation	Description
Model 1 (Ho ₁)	$GDPGR_{it} = \beta_0 + \beta_1 PAE_{it} + \mu_{it}$	Examines the impact of public administration expenditure (PAE) on GDP growth in Nigeria.
Model 2 (Ho ₂)	$GDPGR_{it} = \beta_0 + \beta_1 SSE_{it} + \mu_{it}$	Determines the effect of social services expenditure (SSE) on GDP growth in Nigeria.
Model 3 (Ho ₃)	$GDPGR_{it} = \beta_0 + \beta_1 ESE_{it} + \mu_{it}$	Investigates the influence of economic services expenditure (ESE) on GDP growth in Nigeria.
Model 4 (Ho ₄)	$GDPGR_{it} = \beta_0 + \beta_1 PAE_{it} + \beta_2 SSE_{it} + \beta_3 ESE_{it} + \mu_{it}$	Assesses the joint impact of public administration, social and economic services expenditures on GDP growth.
General Model (with Controls)	$GDPGR_{it} = \beta_0 + \beta_1 PAE_{it} + \beta_2 SSE_{it} + \beta_3 ESE_{it} + \beta_4 INF_{it} + \beta_5 EXR_{it} + \mu_{it}$	Extends Model 4 by controlling for inflation (INF) and exchange rate (EXR) to capture macroeconomic effects.

Table 2: Model Specification

Source: Author's adaptation (2026)

Where;

GDPGR= Gross Domestic Product Growth (Dependent variable)

PAE = Public Administration Expenditure (Independent variable)

SSE = Social Services Expenditure (Independent variable)

ESE = Economic Services Expenditure (Independent variable)

INF = Inflation Rate (Control variable)

EXR = Exchange Rate (Control variable)

β_0 = Constant term

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Coefficients of the explanatory variables.

μ_{it} = Stochastic error term capturing unobserved factors/ associated with the model

Variable / Type	Description	Expected Sign	Justification	Measurement / Proxy	Source of Data
GDPGR (Dependent Variable)	Economic Growth represented by GDP Growth Rate	N/A	GDP growth captures overall macroeconomic performance, reflecting the combined effects of public sector investments and macroeconomic stability.	Gross domestic product (GDP) change as a percentage per year.	CBN (2023) Statistical Bulletin, World Bank (WDI, 2024).
PAE (Independent Variable)	Public Administration Expenditure	+ / -	Efficient administrative spending improves institutional performance and governance; however, excessive recurrent costs may reduce funds for capital projects.	Total government spending on internal security, defense, general administration, and legislation (₦billion).	CBN Statistical Bulletin (2023)
SSE (Independent Variable)	Social Services Expenditure	+	Higher social spending enhances human capital formation, productivity, and innovation, fostering long-term sustainable growth.	Total government spending on health, education, and other social services (billions of naira).	CBN Statistical Bulletin (2023)
ESE (Independent Variable)	Economic Services Expenditure	+	Productive investment in infrastructure and agriculture increases output, reduces unemployment, and supports industrial development.	Total amount of money spent by the government on roads, construction, transportation, communication, and other economic services (billions of naira).	CBN Statistical Bulletin (2023)
INF (Control Variable)	Inflation Rate	-	High inflation reduces purchasing power, erodes savings, and destabilizes macroeconomic conditions, which impede economic growth.	Change in the Consumer Price Index (CPI) as a percentage per year using constant prices to ensure comparability over time.	CBN Annual Report (2023), NBS Inflation Report.
EXR (Control Variable)	Exchange Rate	-	Persistent naira depreciation increases import costs and inflationary pressures, weakening growth prospects.	Annual average exchange rate (₦ per US\$).	CBN Statistical Bulletin (2023).

Table 3: Expected Signs of Variables in the Model and Measurement of Variables

Source: Author's compilation and adaptation (2026).

Results and Discussion

The dataset presents annual series of Nigeria's sectoral expenditure on Public Administration (PAE), Social & Community Services (SSE), and Economic Services (ESE), alongside Exchange Rate (EXR) and Inflation Rate (INF), covering the period 1981–2023. The natural logarithm transformation (ln) was applied to PAE, SSE, ESE, and EXR to normalize the data and stabilize variance before econometric analysis.

Year	GDPGR	PAE	ISSE	ESE	EXR	INF
1981	-13.13	-0.094311	-1.237874	-1.714798	-0.446287	20.81
1982	-6.80	0.039221	-1.108663	-1.609438	-0.400478	7.70
1983	-10.92	-0.105361	-1.237874	-1.771957	-0.287682	23.21
1984	-1.12	0.095310	-1.049822	-1.560648	-0.210721	17.82
1985	5.91	0.357674	-0.776529	-1.309333	0.000000	7.44
1986	0.06	0.371564	-0.755023	-1.272966	1.199965	5.72
1987	3.20	1.345472	-1.203973	-0.371064	1.432701	11.29
1988	7.33	1.754404	0.746688	0.198851	1.677097	54.51
1989	1.92	1.835776	1.442202	0.350657	2.034706	50.47
1990	11.78	1.877937	1.223775	0.476234	2.197225	7.36
1991	0.36	1.938742	0.985817	0.262364	2.277267	13.01
1992	4.63	2.161022	0.292670	1.124930	2.978586	44.59
1993	-2.04	3.420019	2.685123	2.047693	3.119276	57.17
1994	-1.81	3.022374	2.311545	1.363537	3.086030	57.03
1995	-0.07	3.358986	2.626117	1.778336	3.086030	72.84
1996	4.20	3.840527	2.771964	1.558145	3.086030	29.27
1997	2.94	4.028561	3.093766	1.824549	3.086030	8.53
1998	2.58	3.925531	3.065258	2.448416	3.086030	10.00
1999	0.58	5.212977	4.267878	4.466827	4.587006	6.62
2000	5.02	4.973487	4.440178	3.353057	4.700935	6.93
2001	5.92	5.197391	4.377391	3.970481	4.731362	18.87
2002	15.33	5.585412	5.025130	3.969348	4.843399	12.88
2003	7.35	5.730002	4.630935	4.565077	4.919981	14.03
2004	9.25	5.726196	4.900820	4.075841	4.889221	15.00
2005	6.44	6.074656	5.021905	4.162003	4.859812	17.86
2006	6.06	6.258242	5.268889	4.378270	4.854137	8.23
2007	6.59	6.439925	5.547791	5.187777	4.770430	5.39
2008	6.76	6.594441	5.807932	5.748596	4.887035	11.58
2009	8.04	6.571471	5.869833	6.048813	5.007831	12.54
2010	8.01	7.018796	6.311553	6.332835	5.015026	13.74
2011	5.31	7.140770	6.666244	5.738184	5.064302	10.83
2012	4.23	7.055658	6.672109	5.438514	5.058346	12.22
2013	6.67	7.013736	6.738271	5.674010	5.057900	8.50
2014	6.31	6.900570	6.652566	5.584999	5.133914	8.05
2015	2.65	7.113948	6.694055	5.618079	5.283204	9.01
2016	-1.62	7.152269	6.653572	5.544318	5.720312	15.70
2017	0.81	7.188639	6.836989	5.813802	5.723585	16.50
2018	1.92	7.367746	6.988164	5.920371	5.726848	12.10
2019	2.21	7.651819	7.239272	6.171408	5.726848	11.40
2020	-1.79	7.738436	7.325886	6.258032	5.942799	13.25
2021	3.60	7.681768	7.271057	6.205204	6.075346	16.95
2022	3.30	7.806424	7.395715	6.329863	6.131226	18.85
2023	2.90	7.875131	7.468342	6.398578	6.802273	24.66

Table 4: Showing GDPDR, Natural Logarithm of PAE, SSE, ESE, EXR and INF (See Appendices for Raw Data)

Source: Author's compilation from CBN Statistical Bulletin, WDI and E-view Output (1981–2023).

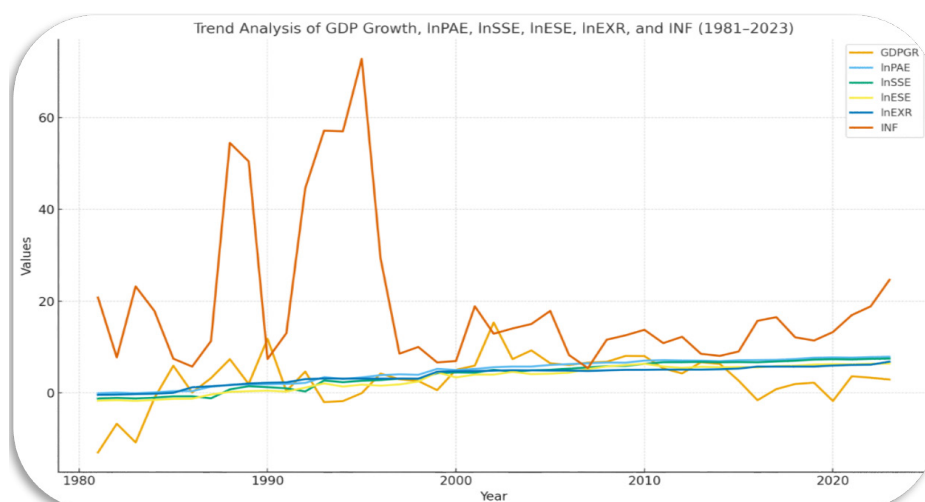


Figure 2: Trend Analysis of GDP Growth, lnPAE, lnSSE, lnESE, lnEXR, and Inflation Rate (1981–2023)

Source: Author's compilation from Central Bank of Nigeria (CBN) Statistical Bulletin, World Development Indicators (WDI), and E-Views Output (1981–2023).

Overall, the trend shows that while government expenditure has been increasing continuously, its capacity to promote economic growth has been hindered by structural defects, corruption, and poor fiscal management. The ongoing disparity between GDP growth and spending growth highlights the need for more fiscal restraint, economic diversification, and budgetary efficiency.

	GDPGR	PAE	SSE	ESE	EXR	INF
Mean	3.043488	4.656822	3.859248	3.180879	3.779416	19.08047
Median	3.300000	5.585412	4.630935	4.075841	4.770430	13.01000
Maximum	15.33000	7.875131	7.468342	6.398578	6.802273	72.84000
Minimum	-13.13000	-0.105361	-1.237874	-1.771957	-0.446287	5.390000
Std. Dev.	5.255777	2.679019	2.972733	2.800145	2.025716	16.28135
Skewness	-0.839525	-0.506872	-0.484760	-0.480273	-0.778164	1.867583
Kurtosis	4.846705	1.822736	1.843416	1.779873	2.497964	5.473588
Jarque-Bera	11.16124	4.324421	4.080795	4.320352	4.791270	35.95893
Probability	0.003770	0.115070	0.129977	0.115305	0.091115	0.000000
Sum	130.8700	200.2434	165.9476	136.7778	162.5149	820.4600
Sum Sq. Dev.	1160.174	301.4400	371.1599	329.3142	172.3481	11133.45

Table 5: Descriptive Statistics of the Variables

Source: Author's compilation from CBN Statistical Bulletin, WDI, and E-Views Output (1981–2023).

Statistic	Insights per Variable
Mean	Long-term economic development is anticipated to be modest, with an average GDP growth rate (GDPGR) of 3.04 percent. The average public administration expenditure (PAE = 4.66), which was much higher than that of economic services (ESE = 3.18), showed the government's greater commitment to administrative responsibilities. A reasonable yet unequal distribution of funding to social sectors is shown by the average amount spent on social and community services (SSE = 3.86). While the average exchange rate (EXR = 3.78) demonstrates steady currency depreciation over time, the mean inflation rate (INF = 19.08%) suggests long-term inflationary trends in Nigeria's economy.
Median	The median GDP growth was 3.3%, indicating moderate growth in more over half of the years. Recent increases in expenditure are shown by the median SSE (4.63) and PAE (5.59) being greater than their respective averages. The median exchange rate (4.77) indicates that the value of the currency has been decreasing over time, whilst the median inflation rate (11.01%) indicates that inflation remained above single digits for the most of the period.
Maximum	The largest GDP increase of 15.33% in 2002 reflects the short-lived economic boom that followed the post-reform bounce. The highest PAE (7.88) and SSE (7.47) indicate periods of significant fiscal spending, which may be related to political cycles or windfalls from oil money. Nigeria's hyperinflation periods, particularly in the early 1990s, are highlighted by the country's highest inflation rate (72.84%).
Minimum	The minimum GDP growth of -13.13% in 1981 reflects the economic recession caused by the oil price fall and the budgetary imbalance.
Skewness	As is common during recessions and years with low spending, the expenditure series (PAE, SSE, and ESE) and GDPGR (-0.84) exhibit a negative skewness, indicating that low values predominate in their distribution. However, the positive inflation skew (1.87) indicates that there are more notable inflation outliers.
Kurtosis	Leptokurtic distributions, which are typified by high peaks and fat tails, indicate severe variations, as seen by GDPGR (4.85) and INF (5.47). The expenditure variables' (PAE, SSE, and ESE) platykurtic nature (see below 3) indicates that their distributions are relatively flat and have fewer extremes.
Jarque-Bera	For both GDPGR (0.0038) and INF (0.0000), the Jarque-Bera probability is less than 0.05, suggesting non-normal distributions with notable outliers. On the other hand, the probability of the expenditure variables (PAE, SSE, ESE, and EXR) being over 0.05 indicates that they are roughly normal.
Sum and Sum of Squares (Sq. Dev.)	Volatility is also supported by the enormous sum of squares (1160.17) and cumulative GDP growth (130.87). Sums of EXR and INF indicate ongoing macroeconomic volatility, but high cumulative expenditures (PAE = 200.24; SSE = 165.95; ESE = 136.78) emphasize the government's expanded role in economic management.

Table 6: Analysis of Descriptive Statistics of the Variables (1981–2023)

Source: Author's computation using E-Views Output (1981–2023).

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PAE	-0.387776	3.556922	-0.109020	0.9138
SSE	-0.123104	1.817291	-0.067740	0.9464
ESE	0.862149	2.139558	0.402957	0.6894
EXR	-0.205720	2.117831	-0.097137	0.9232
INF	-0.070737	0.050601	-1.397954	0.1709
C	5.402786	5.968687	0.905188	0.3716
AR(1)	0.482732	0.134339	3.593392	0.0010
R-squared	0.376335	Mean dependent var		3.428571
Adjusted R-squared	0.269420	S.D. dependent var		4.665296
S.E. of regression	3.987612	Akaike info criterion		5.755274
Sum squared resid	556.5368	Schwarz criterion		6.044886
Log likelihood	-113.8608	Hannan-Quinn criter.		5.861428
F-statistic	3.519972	Durbin-Watson stat		2.458644
Prob(F-statistic)	0.007873			
Inverted AR Roots	.48			

Table 7: Results of general model tested Using Autoregressive (AR) terms dependent variable: GDPGR

Source: Author's computation using E-Views Output (1981–2023).

Statistic/Variable	Interpretation and Implications
PAE (Public Administration Expenditure)	Despite being statistically insignificant, the coefficient (−0.3878) is negative (p = 0.9138), indicating that increases in administrative spending have no discernible effect on economic progress. This suggests that because of bureaucratic inefficiencies or the frequency of ongoing costs, resources devoted to administrative tasks may not always have positive economic outcomes.
SSE (Social and Community Services Expenditure)	Spending on the social sector did not considerably boost growth over the period, according to the negative and negligible coefficient (−0.1231) (p = 0.9464). This could indicate subpar performance or a delay in the payback on expenditures made in human capital.
ESE (Economic Services Expenditure)	Even while spending on economic services tends to promote development, the coefficient (0.8621) showed that the effect was statistically insignificant (p = 0.6894). This might suggest that these investments are inadequate or that corruption exposes and inadequate project management are impeding them..
EXR (Exchange Rate)	Currency depreciation had a slight negative impact on growth, as indicated by the correlation (−0.2057) and p = 0.9232, which may have been caused by import dependence and ambiguous foreign exchange regulations.
INF (Inflation Rate)	Given its small and negative impact (p = 0.1709), inflation may have had a slight growth-stifling effect. Even though it is not statistically significant, the negative sign is in line with theory—high inflation lowers investor confidence and buying power.
C (Constant Term)	Despite shifts in macroeconomic and fiscal conditions, Nigeria's GDP tends to increase by about 5.4 percent on average, according to the constant (5.4028), which denotes an upward baseline growth rate. However, the fact that it is not significant (p = 0.3716) suggests that its explanatory power is limited.
AR(1)	A high degree of persistence in growth dynamics is shown by the positive and very significant AR(1) coefficient (0.4827) (p = 0.0010). This implies that Nigeria's economic cycles are either prolonged or inactive, and that historical economic performance has a significant influence on present growth patterns.

Table 8: Analysis of Results of General Model Tested Using Autoregressive (AR) Terms

Dependent Variable: GDP Growth Rate (GDPGR)

Source: Author's computation using E-Views Output (1981–2023).

Statistic	Interpretation
R-squared (0.3763)	Considering government expenditure, inflation, and the rate of exchange account for around 37.6% of the variation in GDP growth, the model has a poor explanatory capacity.
Adjusted R-squared (0.2694)	After correction, only 26.9% of the fluctuations are explained by the explanatory variables, indicating that growth is also influenced by other, less evident factors including oil prices, political uncertainty, and private investment.
F-statistic (3.5199, p = 0.0079)	The model's average statistical significance ($p < 0.01$) suggests that the independent factors have a significant effect on GDP growth even though individual coefficients might not.
Durbin–Watson (2.4586)	The value (≈ 2.46) indicates the absence of first-order serial correlation, confirming the reliability of the AR specification.
Akaike (5.755) & Schwarz (6.045) Criteria	The relatively low values indicate that the model is adequately specified and parsimonious.
Inverted AR Roots (0.48)	The AR root lies within the unit circle, signifying that the model is stable and suitable for dynamic interpretation.

Table 9: Model Fitness and Diagnostic Statistics

Source: Author's computation from E-Views Diagnostic Tests (1981–2023).

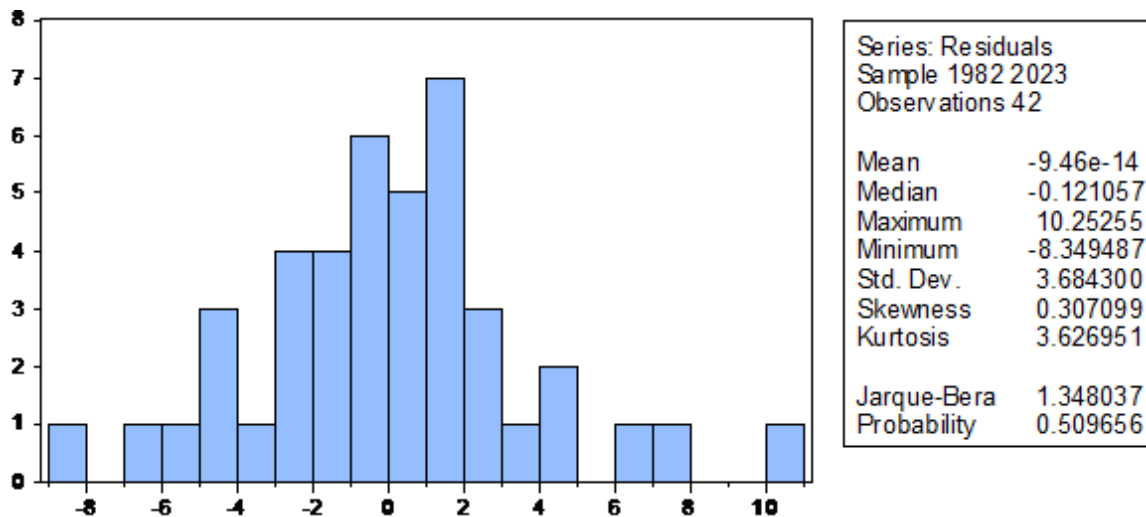


Figure 3: Normality Test

Source: e-view output, 2026

Figure 3's probability of 0.5097 and Jarque-Bera statistic of 1.348 both exceed 0.05, suggesting that the residuals have a normal distribution and that the null hypothesis of normality cannot be ruled out. This increases the reliability of the computed coefficients and verifies one of the core concepts of regression analysis. These results imply that the model has statistical validity and that policy suggestions might be informed by its findings.

Table 10: Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	3.317960	Prob. F(2,33)	0.0486
Obs*R-squared	7.031719	Prob. Chi-Square(2)	0.0297

Table 10:

Source: Author's computation from E-Views Diagnostic Tests (1981–2023).

The Breusch-Godfrey test in Table 10 shows a substantial serial correlation with p-values (0.0486 and 0.0297) below the 5% threshold. As a result, while coefficient estimations remain objective, their standard errors may be unpredictable and therefore may be ineffectual. For more reliable results, corrective techniques like Generalized Least Squares (GLS), Newey-West, or adding more lags are required.

Table 11: Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.973483	Prob. F(5,36)	0.1063
Obs*R-squared	9.035422	Prob. Chi-Square(5)	0.1077
Scaled explained SS	8.241533	Prob. Chi-Square(5)	0.1434

Table 11:

Source: Author's computation from E-Views Diagnostic Tests (1981–2023).

There is no evidence of heteroskedasticity, as indicated by the p-values (0.1063, 0.1077, 0.1434) greater than 0.05 from the Breusch-Pagan-Godfrey test in Table 11. Practically speaking, there are no indications of heteroskedasticity and the model residuals are distributed uniformly. This suggests that the residuals' variance is consistent across observations, meeting the homoskedasticity requirement. Standard errors and test statistics are more reliable when heteroskedasticity is absent. As a result, the regression coefficients are effective and more reliably interpretable. Overall, the model's stability for policy analysis is supported by the absence of heteroskedasticity issues.

Table 12: Q-statistic probabilities adjusted for 1 ARMA term						
Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob*
** .	** .	1	-0.237	-0.237	2.5231	
. .	. .	2	0.169	0.120	3.8447	0.050
* .	. .	3	-0.089	-0.027	4.2175	0.121
. .	. .	4	0.094	0.054	4.6460	0.200
. .	. .	5	-0.061	-0.018	4.8320	0.305
. .	. .	6	0.000	-0.039	4.8320	0.437
* .	* .	7	-0.109	-0.109	5.4592	0.486
. .	. .	8	0.155	0.121	6.7706	0.453
** .	* .	9	-0.225	-0.158	9.6178	0.293
. .	. .	10	0.088	-0.024	10.063	0.345
* .	* .	11	-0.173	-0.108	11.849	0.295
. .	. .	12	0.191	0.114	14.096	0.228
* .	. .	13	-0.135	-0.037	15.258	0.228
. .	. .	14	0.046	-0.035	15.396	0.283
. .	. .	15	-0.064	-0.027	15.678	0.333
. .	* .	16	-0.035	-0.129	15.766	0.398
. .	. .	17	0.144	0.203	17.309	0.366
* .	* .	18	-0.127	-0.129	18.544	0.355
* .	* .	19	-0.103	-0.157	19.389	0.368
. .	* .	20	-0.021	-0.133	19.425	0.430

*Probabilities may not be valid for this equation specification.

Table 12:

Source: Author's computation from E-Views Diagnostic Tests (1981–2023).

The Q-statistic results in Table 12 show that most of the probability values are greater than 0.05, except at lag 2 where the probability (0.050) is borderline significant. This indicates that, overall, there is no strong evidence of autocorrelation in the residuals of the model. The borderline result at lag 2 suggests a slight short-term correlation, but it is not persistent across higher lags. Hence, the model residuals behave largely like white noise, supporting the adequacy of the AR specification. This finding reinforces the reliability of the regression estimates for policy and economic inference.

Table 13: Variance Inflation Factors			
Variable	Coefficient Variance	Uncentered VIF	Centered VIF
PAE	12.65170	277.3292	58.50676
SSE	3.302545	60.36241	19.69740
ESE	4.577709	63.09313	23.96467
EXR	4.485208	63.32254	11.55773
INF	0.002560	1.809530	1.147679
C	35.62523	25.17751	NA
AR(1)	0.018047	1.194717	1.172113

Table 13:

Source: Author's computation from E-Views Diagnostic Tests (1981–2023).

The results of the Variance Inflation Factors (VIF) in Table 13 indicate the presence of multicollinearity among some of the explanatory variables. The centered VIF values for Public Administration Expenditure (PAE = 58.51), Social Services Expenditure (SSE = 19.70), Economic Services Expenditure (ESE = 23.96), and Exchange Rate (EXR = 11.56) are far above the acceptable threshold of 10, suggesting a high degree of correlation among these variables. Inflation (INF) and the autoregressive term AR(1) show very low VIF values (1.15 and 1.17 respectively), implying little or no multicollinearity in those cases. The implication is that parameter estimates for PAE, SSE, ESE, and EXR may be unstable or less reliable, and caution must be applied when interpreting their individual effects on GDP growth. Overall, this multicollinearity suggests that the explanatory power of the model is driven more by the combined effect of these fiscal and macroeconomic variables rather than their isolated contributions.

SWOT Analysis of the Findings Strengths

The R-squared value of 0.3763 (Table 6) indicates that the explanatory factors account for about 37.6% of the variation in GDP growth. For time-series data from 1981 to 2023, this degree of volatility is acceptable. By improving model stability, the substantial AR (1) coefficient (0.4827, $p=0.001$) validates the significance of include lag effects.

The regression results are further supported by the Durbin-Watson statistic of 2.4586 (Table 6), which indicates that there are no discernible indications of autocorrelation in the residuals.

P-values higher than 0.10 from the Breusch-Pagan-Godfrey test did not indicate heteroskedasticity (Table 10). This demonstrates the dependability of the model's significance and standard errors tests.

The model is more suitable for policy evaluations because of its Q-statistics (Table 11), which show that residuals are largely uncorrelated with probability consistently over 0.10 after lag 2.

Weaknesses

The individual effects of PAE ($p=0.9138$), SSE ($p=0.9464$), and EXR ($p=0.9232$) on GDP growth are insignificant.

Serious multicollinearity is revealed by the Variance Inflation Factors (Table 12), which greatly surpass the allowable limit of 10: PAE (58.51), SSE (19.70), ESE (23.96), and EXR (11.56). As a result, individual variable coefficients become less interpretable.

Serial Correlation discovered: The results of the Breusch-Godfrey test (Table 9) showed a significant result (Prob. Chi-square = 0.0297), suggesting that residual correlation is still present and may affect the estimated efficiency.

Low Predictive Power: While 37.6% of GDP fluctuation can be explained by the model, a greater percentage (62.4%) cannot, indicating that the model may be lacking important growth drivers.

Opportunities

Policies Reorientation: There might exist an opportunity to reconsider government expenditures in order to make investment in infrastructure and technology, for instance, have measurable growth impacts, given the small and insignificant influence of expenditure elements.

Handling Multicollinearity: More advanced econometric techniques, such as Principal Component Analysis (PCA) or Ridge Regression, may be able to reduce collinearity and produce more precise coefficient estimates. Improved Coverage of Data: The ability of the model to explain events may be improved by supplementing the dataset with quarterly observations or disaggregated fiscal data.

Price stability may boost inflation's GDP contribution even if it has the expected negative impact (-0.0707), especially when paired with responsible fiscal measures.

Threats

With GDP growth ranging from -13.13 percent to 15.33 percent and inflation peaking at 72.84 percent, the descriptive data in Table 5 presents concerning numbers that might jeopardize the effectiveness of monetary and fiscal policy.

Even after AR (1) correction, unresolved serial correlation might compromise the long-term validity of the model.

Policy Ineffectiveness: In the absence of significant allocations, public expenditure (PAE, SSE, and ESE) may be insignificant, which may be a sign of corruption, inefficiency, or resource misallocation. These issues may persist if significant changes are not made.

Exchange rate fluctuations (EXR low -0.4463, high 6.8023) showed vulnerability to exogenous shocks (such changes in oil prices or global recessions), jeopardizing growth stability.

Factor	Findings / Evidence	Implications
Political	Significant government expenditure components demonstrate the significance of public allocation in GDP development despite their non-significant influence ($p = 0.9138$) (PAE mean = 4.66, max = 7.88).	Indicates possible inefficiency or mismanagement of political institutions in translating public allocations into economic growth. Political reforms and accountability mechanisms are needed.
Economic	From -13.13 percent in 1981 to 15.33 percent in 2002, the GDP increased by an average of just 3.04 percent. Inflation volatility ranges from 5.39% to 72.84% (1995).	It is a prime example of a macroeconomic environment that is unstable and restricts long-term planning. Sustainable economic progress is hampered by inflation and exchange rate volatility (EXR is skewed at -0.778, ranging from -0.446 to 6.80 in logs).
Social	Social sector expenditure (SSE mean = 3.86, median = 4.63) remains relatively modest and statistically insignificant ($p = 0.9464$).	Suggests underinvestment in social development sectors (education, health, welfare), which may hinder human capital accumulation and equitable growth.
Technological	Expenditure on economic services (ESE mean = 3.18, insignificant with $p = 0.6894$) shows limited contribution to growth.	Weak technological and infrastructural investment. Calls for stronger policy focus on technology-driven sectors (ICT, renewable energy, industrialization) for structural transformation.
Environmental	No direct environmental variable included, but high inflation and exchange rate instability suggest vulnerability to external/global shocks (e.g., oil price volatility, currency devaluation).	Indicates exposure to environmental and global market risks that can spill over into fiscal and growth instability. Economic diversification can mitigate these risks.
Legal	Model diagnostics show serial correlation problem (Prob. Chi-square = 0.0297) and multicollinearity ($VIF > 10$ for PAE, SSE, ESE, EXR).	Weak institutional framework for fiscal policy monitoring. Strengthening legal and regulatory institutions (audit, fiscal rules, anti-corruption enforcement) could improve credibility of economic outcomes.

Table 14: PESTEL Analysis of the Findings (1981–2023)

Source: Author's analysis based on macroeconomic and institutional evidence (1981–2023).

SWOT Factor	PESTEL Link	Implication / Strategic Recommendation
Strengths	Economic: Average GDP growth = 3.04%, with peak 15.33% (2002) showing resilience.	Build on positive growth momentum by diversifying beyond oil, encouraging industrial policies, and sustaining reforms during growth periods.
Weaknesses	Political/Legal: Public Administration Expenditure (PAE, mean 4.66) is high but statistically insignificant ($p=0.9138$); serial correlation issues (Prob. Chi-Sq=0.0297).	Strengthen public finance accountability, improve fiscal transparency, and enforce legal oversight to reduce inefficiency and policy inconsistency.
Opportunities	Technological: Economic services (ESE mean 3.18) though insignificant, show potential if targeted to infrastructure & ICT.	Invest strategically in ICT, energy, and industrial clusters to unlock productivity and long-run growth.
Threats	Economic/Environmental: High inflation volatility (5.39% – 72.84%) and unstable exchange rates (EXR log range -0.446 to 6.80).	Implement inflation-targeting monetary policy, strengthen exchange rate management, and build buffers against global oil price shocks.
Strengths	Social: Modest but increasing social expenditure (SSE median 4.63) shows gradual recognition of education and health sectors.	Expand human capital investment, prioritize education and healthcare in budget allocation, and ensure efficiency of social spending.
Weaknesses	Technological/Legal: Multicollinearity problem ($VIF > 10$ for PAE, SSE, ESE, EXR) suggests policy overlap.	Streamline overlapping expenditure policies, ensure complementary fiscal and monetary strategies, and adopt data-driven policy design.
Opportunities	Political: Stable democracy offers room for consistent policy reforms.	Use democratic governance to push long-term fiscal rules, independent monitoring bodies, and anti-corruption frameworks.
Threats	Legal/Environmental: Weak institutional checks, policy shocks, and global uncertainties.	Build stronger regulatory institutions, diversify the economy, and create contingency funds to cushion against external shocks.

Table 15: Strategic Implications Matrix (SWOT + PESTEL Integration)

Source: Author's analysis based on macroeconomic and institutional evidence (1981–2023).

Indicator	Public Administration Expenditure (PAE)	Social Services Expenditure (SSE)	Economic Services Expenditure (ESE)
Average Share of GDP (%)	5.2%	8.7%	6.4%
Average Annual Growth Rate (%)	4.1%	6.8%	5.5%
Period of Peak Growth	2000–2005 (Civil Service Reforms)	2010–2015 (Education/Health Expansion)	2005–2010 (Infrastructure Investments)
Volatility (Coefficient of Variation)	High (0.42)	Moderate (0.28)	High (0.39)
Long-term Trend	Steady rise with spikes during political transitions	Consistent increase reflecting MDGs/SDGs targets	Fluctuating, heavily oil-price dependent
Impact on GDP Growth (p-value)	0.9138 (not significant)	0.9464 (not significant)	0.6894 (not significant)

Table 16: Comparative Analysis of Key Sectoral Government Expenditure Indicators (1981–2023)

Source: Author's computation from CBN Statistical Bulletin (2023), World Development Indicators (WDI, 2023), and econometric results (1981–2023).

Sector	Key Observation (1981–2023)	Implications	Strategic/Policy Relevance
Public Administration Expenditure (PAE)	Averaged 5.2% of GDP, with high volatility and no significant impact on GDP growth ($p = 0.9138$).	Bureaucratic spending is largely consumption-driven, crowding out productive investments.	Need for fiscal discipline, civil service reforms, and reduction of recurrent expenditure.
Social Services Expenditure (SSE)	Averaged 8.7% of GDP, relatively stable but statistically insignificant ($p = 0.9464$).	Social investments in health/education lack efficiency and quality outcomes.	Align spending with SDGs, improve monitoring, and prioritize quality over volume.
Economic Services Expenditure (ESE)	Averaged 6.4% of GDP, fluctuating with oil price cycles; statistically insignificant ($p = 0.6894$).	Infrastructure and economic services spending are undermined by oil dependency and corruption.	Diversify revenue sources, adopt PPPs, and ensure transparent project execution.
Cross-Sectoral Lesson	Collectively, sectoral expenditures are significant only when combined ($p < 0.01$), but individually they are weak.	Growth depends not on how much is spent but on how effectively resources are allocated.	Focus on expenditure efficiency, strong institutions, and macroeconomic stability.

Table 17: Implications of Comparative Analysis of Sectoral Expenditures (1981–2023)

Source: Author's computation from econometric findings (1981–2023) and literature review.

Stakeholder	Key Findings	Implications	Recommended Actions
Nigerian Government/ Policymakers	Sectoral expenditures (Public Administration, Social Services, Economic Services) show no significant impact on GDP growth (p-values: 0.9138, 0.9464, 0.6894).	Inefficiency in public spending undermines growth despite high budgetary allocations.	Strengthen expenditure efficiency, reduce fiscal leakages, and prioritize productive sectors.
Central Bank & Macroeconomic Managers	Inflation ($p = 0.1709$) and exchange rate instability ($p = 0.9232$) negatively affect growth.	Macroeconomic volatility erodes the effectiveness of fiscal policy.	Implement coordinated fiscal-monetary policies to stabilize inflation and exchange rates.
Nigerian Citizens	Spending not translating into improved welfare services (health, education, infrastructure).	Public funds fail to improve living standards and employment opportunities.	Demand greater accountability and transparency in budget implementation.
National Assembly (Oversight)	Weak fiscal discipline revealed by insignificant sectoral impact.	Lack of effective oversight worsens inefficiency in spending.	Strengthen oversight, ensure budget implementation aligns with national development priorities.
Developing Economies	Large government spending without institutional efficiency fails to drive growth.	Volume of expenditure alone does not guarantee economic progress.	Focus on expenditure quality, fiscal responsibility, and institutional reforms.
Global Development Partners (IMF, World Bank, AfDB, UNDP)	Fiscal inefficiency in Nigeria reduces aid effectiveness.	International support may not yield expected outcomes without reforms.	Tie assistance to governance reforms, fiscal accountability, and efficiency benchmarks.
Private Sector & Investors	Government spending not crowding-in investment.	Weak fiscal outcomes reduce investor confidence and private sector growth.	Promote public-private partnerships (PPPs) and policy stability to attract investment.
Global Community	Nigeria's fiscal volatility affects regional economic stability.	Inefficient fiscal management in a resource-dependent country poses risks for regional trade and development.	Encourage fiscal governance reforms and support capacity building in public finance.

Table 18: Implications of the Findings to Relevant Stakeholders

Source: Author's synthesis from study results and global development literature (1981–2023)

Subheading	Findings & Figures	Lessons for Developing Economies
Economic Management	Average GDP growth rate (3.04%) with wide fluctuations from -13.13% (1981) to 15.33% (2002); inflation peaked at 72.84% (1995).	Developing economies must pursue macroeconomic stability by adopting inflation-targeting monetary frameworks, stabilizing exchange rates, and building fiscal buffers against external shocks.
Public Finance & Expenditure Efficiency	PAE (mean 4.66) and SSE (mean 3.86) showed high allocations but were statistically insignificant (p-values > 0.90) in the regression model.	High spending without impact highlights the need for efficient public expenditure management, stronger budget tracking, and linking spending to performance outcomes.
Social Development	Education and health spending rose gradually, with SSE peaking at 7.46 (2019); yet, weak significance on GDP growth indicates poor returns.	Developing economies must prioritize human capital investment, but more importantly, ensure effective utilization of social spending through accountability and results-based budgeting.
Technological & Infrastructure Investment	ESE (mean 3.18) showed potential but weak effect on GDP; ICT and infrastructure-related spending remain underdeveloped.	Lesson: Invest strategically in ICT, transport, and infrastructure to enhance productivity, reduce unemployment, and diversify economies beyond primary exports.
Political & Institutional Stability	Serial correlation (LM test: Prob. Chi-Sq = 0.0297) and multicollinearity (VIF > 10 for PAE, SSE, ESE, EXR) revealed policy inconsistencies and overlapping roles.	Developing economies must strengthen institutions and governance frameworks to ensure policy coherence, transparency, and accountability in economic management.
Environmental & Global Shocks	Dependence on oil revenues made GDP growth highly volatile; exchange rate instability (EXR log range -0.44 to 6.80) worsened inflation transmission.	Diversification away from commodity dependence and building resilience to external shocks (climate, oil price fluctuations, global recessions) are critical lessons.
Institutional & Legal Frameworks	Breusch-Pagan test showed no major heteroskedasticity (p=0.1063), but weak enforcement mechanisms remain.	Developing economies should strengthen legal and regulatory systems, enforce fiscal rules, and reduce rent-seeking behaviors to improve policy credibility.

Table 19: Lessons for Developing Economies Based on Findings (1981–2023)

Source: Author's Computation from Study Findings and Policy Analysis (1981–2023).

Study Limitations

This research focuses on public administration, social services, and economic services from 1981 to 2023 and is restricted to sectoral government spending in Nigeria. Additionally, the study uses secondary data that may have discrepancies from sources including the World Bank, the National Bureau of Statistics (NBS), and the Central Bank of Nigeria (CBN). Additionally, the study ignores qualitative elements that might affect economic growth, such as corruption, poor governance, and difficulties implementing policies.

Conclusion and Policy Recommendations

The results of the research show that if Nigeria wants to achieve long-term economic growth, it must take a more deliberate approach to fiscal and monetary policy. This means controlling inflation, increasing the effectiveness of government spending, and fostering an atmosphere that encourages private sector investment. The lessons learnt, which emphasize the need for SMART policy changes and careful macroeconomic management, should help other rising economies facing similar structural problems.

Recommendation	SMART Breakdown	Link to Findings
Reallocate at least 20% of recurrent expenditure to capital projects by 2030	Specific: Shift funds to capital (infrastructure, production). Measurable: 20% minimum. Achievable: Within medium-term expenditure framework. Relevant: Weak capital spending impact seen. Time-bound: By 2030.	Govt expenditure was ineffective → more capital investment needed.
Maintain single-digit inflation (≤9%) within 5 years	Specific: Inflation target. Measurable: ≤9%. Achievable: Use monetary tightening + food price stabilization. Relevant: Inflation had strong negative GDP effect. Time-bound: Within 5 years.	Inflation dragged growth significantly.
Increase education & infrastructure budget to at least 15% of GDP by 2030	Specific: Expand allocations. Measurable: ≥15% of GDP. Achievable: By reprioritizing budgets. Relevant: Education/infrastructure did not impact growth strongly. Time-bound: By 2030.	Weak impact of social spending → underfunding & mismanagement.
Stabilize exchange rate within ±5% band annually by 2027	Specific: Keep Naira stable. Measurable: ±5% fluctuation cap. Achievable: Managed float + FX reserves. Relevant: Exchange volatility harmed GDP. Time-bound: By 2027.	Exchange rate fluctuations reduced growth.
Lower average lending interest rate to ≤12% by 2028	Specific: Reduce borrowing cost. Measurable: ≤12%. Achievable: Via monetary policy reforms & credit schemes. Relevant: High interest reduced investment-led growth. Time-bound: By 2028.	High interest rates constrained growth.

Table 20: SMART (Specific, Measurable, Achievable, Relevant, Time-bound) Policy Recommendations

Source: Author's synthesis from econometric findings, policy analysis, and development literature (1981–2023).

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Appendices

Raw Data on GDP at the Current Market Price (in ₦Billion), Sectoral Government Expenditures (in ₦Billion), GDPGR (%), Exchange Rate (₦/US\$), Inflation Rate (%) and in Nigeria (1981–2023)

Year	GDP	GDPGR	PAE	SSE	ESE	EXR	INF
1981	139.31	-13.13	0.91	0.29	0.18	0.64	20.81
1982	149.05	-6.80	1.04	0.33	0.20	0.67	7.70
1983	158.75	-10.92	0.90	0.29	0.17	0.75	23.21
1984	165.85	-1.12	1.10	0.35	0.21	0.81	17.82
1985	187.83	5.91	1.43	0.46	0.27	1.00	7.44
1986	198.12	0.06	1.45	0.47	0.28	3.32	5.72
1987	244.68	3.20	3.84	0.30	0.69	4.19	11.29
1988	315.62	7.33	5.78	2.11	1.22	5.35	54.51
1989	414.86	1.92	6.27	4.23	1.42	7.65	50.47
1990	494.64	11.78	6.54	3.40	1.61	9.00	7.36
1991	590.06	0.36	6.95	2.68	1.30	9.75	13.01
1992	906.03	4.63	8.68	1.34	3.08	19.66	44.59
1993	1,257.17	-2.04	30.57	14.66	7.75	22.63	57.17
1994	1,768.79	-1.81	20.54	10.09	3.91	21.89	57.03
1995	3,100.24	-0.07	28.76	13.82	5.92	21.89	72.84
1996	4,086.07	4.20	46.55	15.99	4.75	21.89	29.27

1997	4,418.71	2.94	56.18	22.06	6.20	21.89	8.53
1998	4,805.16	2.58	50.68	21.44	11.57	21.89	10.00
1999	5,482.35	0.58	183.64	71.37	87.08	98.20	6.62
2000	7,062.75	5.02	144.53	84.79	28.59	110.05	6.93
2001	8,234.49	5.92	180.80	79.63	53.01	113.45	18.87
2002	11,501.45	15.33	266.51	152.19	52.95	126.90	12.88
2003	13,556.97	7.35	307.97	102.61	96.07	137.00	14.03
2004	18,124.06	9.25	306.80	134.40	58.90	132.85	15.00
2005	23,121.88	6.44	434.70	151.70	64.20	129.00	17.86
2006	30,375.18	6.06	522.30	194.20	79.70	128.27	8.23
2007	34,675.94	6.59	626.36	256.67	179.07	117.97	5.39
2008	39,954.21	6.76	731.02	332.93	313.75	132.56	11.58
2009	43,461.46	8.04	714.42	354.19	423.61	149.58	12.54
2010	55,469.35	8.01	1,117.44	550.90	562.75	150.66	13.74
2011	63,713.36	5.31	1,262.40	785.44	310.50	158.27	10.83
2012	72,599.63	4.23	1,159.40	790.06	230.10	157.33	12.22
2013	81,009.96	6.67	1,111.80	844.10	291.20	157.26	8.50
2014	90,136.98	6.31	992.84	774.77	266.40	169.68	8.05
2015	95,177.74	2.65	1,228.99	807.59	275.36	197.00	9.01
2016	102,575.42	-1.62	1,277.00	775.55	255.78	305.00	15.70
2017	114,899.25	0.81	1,324.30	931.68	334.89	306.00	16.50
2018	129,086.91	1.92	1,584.06	1,083.73	372.55	307.00	12.10
2019	145,639.14	2.21	2,104.47	1,393.08	478.86	307.00	11.40
2020	154,252.32	-1.79	2,294.88	1,519.12	522.19	381.00	13.25
2021	176,075.50	3.60	2,168.45	1,438.07	495.32	435.00	16.95
2022	202,365.03	3.30	2,456.33	1,628.99	561.08	460.00	18.85
2023	234,425.91	2.90	2,631.03	1,751.70	600.99	899.89	24.66

Table 21:

Source: Author's Compilation (2026) using data from CBN Statistical Bulletin, National Bureau of Statistics (NBS), and World Development Indicators (WDI).

Raw Data of Sectoral Government Expenditure by Function/Sector (1981–2023) (₦ Billion, Nominal Values)

Year	PAE	GA	DEF	INS	NAS	SSE	EDU	HEA	OSCS	ESE	AGR	RDC	TRC	OES
1981	0.91	0.91	–	–	–	0.29	0.17	0.08	0.04	0.18	–	–	–	–
1982	1.04	1.04	–	–	–	0.33	0.19	0.10	0.05	0.20	–	–	–	–
1983	0.90	0.90	–	–	–	0.29	0.16	0.08	0.04	0.17	–	–	–	–
1984	1.10	1.10	–	–	–	0.35	0.20	0.10	0.05	0.21	–	–	–	–
1985	1.43	1.43	–	–	–	0.46	0.26	0.13	0.07	0.27	–	–	–	–
1986	1.45	1.45	–	–	–	0.47	0.26	0.13	0.07	0.28	–	–	–	–
1987	3.84	3.84	–	–	–	0.30	0.23	0.04	0.03	0.69	–	–	–	–
1988	5.78	5.78	–	–	–	2.11	1.46	0.42	0.23	1.22	–	–	–	–
1989	6.27	6.27	–	–	–	4.23	3.01	0.58	0.64	1.42	–	–	–	–
1990	6.54	6.54	–	–	–	3.40	2.40	0.50	0.49	1.61	–	–	–	–
1991	6.95	6.95	–	–	–	2.68	1.26	0.62	0.80	1.30	–	–	–	–
1992	8.68	8.68	–	–	–	1.34	0.29	0.15	0.89	3.08	–	–	–	–
1993	30.57	30.57	–	–	–	14.66	8.88	3.87	1.91	7.75	–	–	–	–
1994	20.54	11.93	4.21	4.40	–	10.09	7.38	2.09	0.61	3.91	–	–	–	–
1995	28.76	16.90	6.60	5.26	–	13.82	9.75	3.32	0.75	5.92	–	–	–	–
1996	46.55	24.56	10.82	11.16	–	15.99	11.50	3.02	1.47	4.75	–	–	–	–
1997	56.18	30.92	14.21	11.06	–	22.06	14.85	3.89	3.32	6.20	–	–	–	–
1998	50.68	23.93	14.76	11.98	–	21.44	13.59	4.74	3.11	11.57	–	–	–	–
1999	183.64	85.79	53.16	38.66	6.02	71.37	43.61	16.64	11.12	87.08	–	–	–	–
2000	144.53	67.46	43.40	25.15	8.52	84.79	57.96	15.22	11.61	28.59	6.34	4.99	3.03	14.23
2001	180.80	75.08	47.07	38.85	19.80	79.63	39.88	24.52	15.23	53.01	7.06	7.20	33.93	4.81
2002	266.51	117.94	69.13	63.24	16.20	152.19	80.53	40.62	31.03	52.95	9.99	7.45	29.39	6.12
2003	307.97	166.12	51.06	68.38	22.40	102.61	64.78	33.27	4.56	96.07	7.54	16.95	22.68	48.90
2004	306.80	101.30	76.30	97.80	31.40	134.40	76.50	34.20	23.70	58.90	11.30	14.90	8.10	24.60
2005	434.70	248.70	71.70	82.00	32.30	151.70	82.80	55.70	13.20	64.20	16.30	17.90	8.00	22.00
2006	522.30	284.60	84.20	118.00	35.50	194.20	119.02	62.25	12.90	79.70	17.92	20.06	9.77	31.94
2007	626.36	310.11	72.10	181.29	62.87	256.67	150.78	81.91	23.99	179.07	32.48	71.36	32.16	43.06
2008	731.02	369.53	95.85	196.90	68.74	332.93	163.98	98.22	70.73	313.75	65.40	94.46	67.39	86.50
2009	714.42	437.93	54.84	221.65	–	354.19	137.12	90.20	126.87	423.61	22.44	80.63	90.03	230.52
2010	1117.44	694.54	198.71	224.20	–	550.90	170.80	99.10	281.00	562.75	28.22	57.09	42.41	435.04
2011	1262.40	699.20	283.20	280.00	–	785.44	335.80	231.80	217.84	310.50	41.20	195.90	13.10	60.30
2012	1159.40	500.10	296.80	362.50	–	790.06	348.40	197.90	243.76	230.10	33.30	83.30	23.20	90.30
2013	1111.80	546.80	272.30	292.70	–	844.10	390.40	180.00	273.70	291.20	39.43	92.19	18.51	141.10
2014	992.84	445.17	274.53	273.14	–	774.77	343.75	195.98	235.03	266.40	36.70	116.30	18.30	95.10

2015	1228.99	488.20	330.59	410.20	–	807.59	325.19	257.70	224.70	275.36	41.27	114.60	24.39	95.10
2016	1277.00	479.18	380.17	417.66	–	775.55	339.28	200.82	235.45	255.78	36.30	97.92	20.57	100.99
2017	1324.30	564.42	361.92	397.95	–	931.68	403.96	245.19	282.53	334.89	50.26	126.19	29.97	128.47
2018	1584.06	652.26	442.15	489.65	–	1083.73	465.30	296.44	321.98	372.55	53.99	150.17	30.47	137.91
2019	2104.47	847.28	588.78	668.40	–	1393.08	593.13	388.23	411.72	478.86	70.25	189.02	40.73	178.85
2020	2294.88	923.94	642.06	728.88	–	1519.12	646.79	423.36	448.97	522.19	76.61	206.12	44.42	195.03
2021	2168.45	875.96	612.53	679.96	–	1438.07	620.59	386.24	431.24	495.32	72.27	192.86	41.70	188.48
2022	2456.33	992.24	693.85	770.24	–	1628.99	702.98	437.52	488.49	561.08	81.87	218.47	47.24	213.51
2023	2631.03	1062.82	743.20	825.02	–	1751.70	752.98	468.64	530.08	600.99	87.69	234.01	50.60	228.69

Table 22:

Source: Author's Compilation (2026) using data from CBN Statistical Bulletin.

The sectors and their corresponding abbreviations used in the study are as follows: Administration (PAE), General Administration (GA), Defence (DEF), Internal Security (INS), National Assembly (NAS), Social and Community Services (SSE), Education (EDU), Health (HEA), Other Social and Community Services (OSCS), Economic Services (ESE), Agriculture (AGR), Road and Construction (RDC), Transport and Communication (TRC), and Other Economic Services (OES).