CAPITAL EXPENDITURE AND INFLATION: IS GOVERNMENT SPENDING WORSENING NIGERIA'S ECONOMIC CRISIS?

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Abstract

This study examines Nigeria's inflation and government capital expenditures from 1991 and 2023. This study examines if government spending on administration, economic services, social and community services, and government transfers has increased or decreased the country's inflation rate. Secondary data from the Central Bank of Nigeria's statistical bulletin was gathered for the study using an ex-post facto research design. To determine the degree to which each category of spending influences the rate of inflation, the study used the Autoregressive Distributed Lag (ARDL) model. The research results demonstrate limited and non-significant links between different expenditure types and inflation while economic services spending generates the most insignificant negative correlation. Increasing capital expenditure during recent years has not reduced high inflation because the existing spending practices appear inadequate to fight inflationary trends. As per the research economic services budget shows some responsiveness to inflation reduction yet it generates no statistically meaningful effects. In contrast, administration, social/community services, and government transfers expenditure show minimal impact on inflation. The study establishes that capital expenditure supports national development but Nigeria's present capital spending system and management tactics fail to solve inflation problems properly. Managed fiscal policy implementations that specifically support macroeconomic priorities need to become the focus to fight inflation while establishing enduring economic equilibrium. Better planning together with expenditure prioritization by government is essential for Nigeria to overcome its economic crisis according to findings from this study.

Keywords: Inflation, Administration, Social, Community, Economic, Transfers, Expenditure

JEL Classification: E62, H50, H54, E31, O55

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INTRODUCTION

Spending by the federal government is essential to preserving public welfare, delivering goods and services, and fostering economic expansion and enhancing the quality of life for its population(Ugochukwu & Oruta, 2021). These expenses, which have both capital and ongoing components, are divided into several categories, including administration, economic services, social services, and transfers. Purchase of physical assets and improvements to already-existing assets, including intangible assets, are considered capital expenditures. Research spending by the Federal Government is included in these categories as well. The size of the economy and its growth are determined by government spending, which accounts for a sizable portion of national income (Purokayo & Umaru, 2012). It can also increase total output, particularly in developing nations where poverty traps and market failures are prevalent.

Government spending's ability to boost the economy depends on how productive or ineffective it is (Saidu & Ibrahim,2019). Government spending that is productive boosts the economy, but spending that is not productive has the opposite effect, with the theoretical underpinnings provided by academics such as Wagner and Keynes, the relationship between infrastructure investment and economic stability has been the subject of much discussion. According to Joy et al (2021), government expenditure on productive endeavours and investments ought to boost economic expansion, whilst government spending on consumption is anticipated to slow it down. The majority of governments around the world believe that public spending is essential for economic growth and use it to stimulate the economy.

Nigeria's federal government has been having trouble funding its capital projects and finding it difficult to carry them out (Akobi, et al, 2021). The upkeep of social amenities, infrastructure, health care, and education—all essential to the nation's development—is expected of the government (Okolo, et al, 2018). To support the Nigerian economic progress, a solution is required, as the federal government's capital expenditures have been dwindling and negligent in recent years. A major macroeconomic problem in Nigeria is inflation, which redistributes wealth and income in ways that benefit some while hurting others (Okolo, et al, 2018). The general price level is rising significantly and steadily as a result of an rise in credit and monetary relative to supply of commodities.

When inflation is high, it has a detrimental impact on economic improvement; when it is low, it can cause stagnation (Okonkwo, et al, 2023). Neoclassical economists contend that because full employment is assumed, higher government spending may result in high inflation. By resources deployment from the private sector to the public sector, which they view as ineffective, they contend that higher government expenditure makes economic recession worse. Both positive and negative effects of inflation are felt by the economy, as it raises the opportunity cost of keeping money and lessens the burden of both public and private debt. Two schools of thought have emerged about the causal relationship between public spending and economic growth: Wagner (1886) argues that public spending is a result of

economic growth, while Keynes (1937) argues that public spending is a tool used by the government to reverse economic downturns by borrowing money from the private sector and returning it through various spending programs.

Statement of the Problem

The continuous rise in prices across Nigeria causes a reduction of purchasing power while creating economic instability and leading to elevated living costs (Muritala, 2011). The primary policy matter at hand involves understanding if government spending serves as a prominent source of inflationary forces. Economic expansion and development need government spending but high or poorly managed spending of public funds generates too much economic fluidity which leads to inflation. This investigation studies the impact that multiple parts of government spending have on inflation rates in Nigeria.

The major problem stems from administration expenditure representing government overhead and public sector salaries as well as bureaucratic expenses. Governments need administration expenses to operate but substantial costs in this section drive inflation while delivering no direct productivity benefits. Development projects suffer from funding shortages since a large public workforce combined with excessive administrative expenses increases inflation levels.

The sectors under economic services such as agriculture along with industry and power and transport are expected to elevate economic productivity because of their increased spending. Economic funds that receive inefficient allocation or poorly managed financing through high levels of debt will create unnecessary market liquidity and drive up prices beyond stability levels.

The government's financial investments in health care and educational programs as well as welfare-based initiatives compose social and community services expenditure. Important social development expenses contribute to price increases when productivity fails to keep up with financial commitments. When subsidies and public sector wages exceed revenue generation the outcome is demand-pull inflation.

Government transfers in form of pensions alongside subsidies together with grants serve to offer monetary aid to citizens. When government programs deliver large transfers or make them to the wrong recipients it leads to increased availability of money which creates demand without corresponding production thus driving prices upward. When prices rise after such transfers the economy experiences more inflationary pressure.

The present research undertakes a study to evaluate the relationships between government spending categories and inflation in Nigeria. Analyzing these relationships enables policymakers to find acceptable levels of fiscal expansion within inflation management frameworks for achieving economic stability.

The main objective of this study is to examine the impact of different components of government capital expenditure on inflation in Nigeria, assessing whether government spending contributes to the country's economic crisis. The specific objectives are to:

1. investigate the effect of administration expenditure on the inflation rate in Nigeria.

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2. analyze the impact of economic services expenditure on inflation in Nigeria.
3. examine the relationship between social and community services expenditure and inflation in Nigeria.
4. evaluate the influence of government transfers on inflation in Nigeria.

LITERATURE REVIEW

Public Expenditure

The government uses public revenue to finance economic, social, and political infrastructures that raise the standard of living for its people, this is known as public expenditure (George-Anokwuru & Ekpenyong, 2020). In both capitalism and communism, when the public sector controls all available resources, these expenditures are frequently the consequence of intrinsic flaws (Nwamuo, 2022). The inability of the capitalism system to close the wealth gap and the fierce competition of the market system in Nigeria frequently need governmental spending (Ebisine & Oki, 2021). The public sector is required to build the financial framework for long-term, steady growth, health, education, employment, and security; to offer social, political, and legal institutions; and to enforce good behaviour. However, in a market system where self-interest predominates, these activities need substantial money and human resources that are not solely available from private citizens or business organizations.

Capital Expenditure

According to Ebisine and Oki (2021), business capital expenditures, or capex, are the funds used to purchase long-term assets for ongoing usage. For a business to succeed over the long term and to remain competitive in the industry, it is essential. Purchases of new machinery, equipment, and research and development are all included in capex. However, the high upfront expenses might make monitoring capital expenditures difficult. With its various financing options, HSBC UK's Asset Finance solutions enable businesses to acquire essential assets without putting a burden on their cash flow. This keeps companies profitable over time.

Public goods and private goods have been examined by Ebisine and Oki (2021), who have distinguished between pure and impure public goods. Resource scarcity frequently results in economic issues, such as figuring out whether a nation's resources are being used to their full potential for full employment and deciding what kinds of commodities to create and how to do it. Allocation, distribution, and stabilisation are the three primary challenges that governments must deal with. The distribution function fosters equity and national cohesion, whereas the allocation function divides up the duties among the government and the business sector. Monetary, social, and economic stability are guaranteed by the federal government. According to Osho, et al (2019), historical and economic factors mean that even though the private sector is more efficient, the public still has a significant influence in democracies. Therefore, the infrastructure required to establish securities, cheap production costs for private entities, and satisfaction

with public goods must be provided by federal government capital expenditures.

Concept of Inflation

A long-term, consistent rise in the average price of goods and services in a nation that is frequently correlated with money is called inflation (Nwamuo, 2022). In this economic scenario, the money supply is growing more quickly than new commodities and services are being produced within the same economy. The percentage change in a price index, such the consumer price index (CPI), is used to calculate the inflation rate. Based on recurring surveys of consumer prices, the CPI calculates the cost of a sample basket of products and services that the typical consumer would buy, however, because the basket has different weights, increases in the cost of some commodities and services can have varied effects on assessed inflation (Ebisine & Oki 2021).

Nigerian Federal Government Capital Expenditure Growth Factors

A number of reasons, such as inflation, rising national debt, population growth, infrastructure provision, agricultural expansion, and industrial growth, are contributing to Nigeria's rising government spending (Adaramola & Dada, 2020). The growth in rice inputs, commodities, and services causes inflationary pressures to raise government spending. The rising national debt raises borrowing and repayment costs, while the growing population raises demand for everything. Government capital expenditures are also raised by the supply of infrastructure, including roads, dams, irrigation projects, communication networks, and water. Agriculture has seen a rise in investment as a result of the commercial commodity markets' expanding need for food. Industrial growth is also a significant factor, resulting in increased government capital spending in important areas that boost the economy of the nation. (Toriola, et al, 2022)

Capital Expenditure as a Fiscal Policy Tool for Nigerian Economic Stabilisation

According to Azolibe (2021) the two types of fiscal policy tools are automatic and discretionary fiscal stabilizers. While discretionary fiscal stabilisers are ad hoc measures meant to address a present economic dysfunction, automatic fiscal stabilisers are integrated into the budgetary structure as counter-cyclical solutions. The main automatic fiscal stabilisers in Nigeria are the personal and corporate income taxes, which react to unfavourable shifts in the overall state of the economy. Similar to tax revenue, these actions are implemented in response to undesirable economic occurrences that occur at specific times. These ad hoc measures in Nigeria include adjustments to tax bases and rates, the adoption or removal of taxes, and purposeful adjustments to government expenditures (John, 2017). They are logically focused on enhancing overall performance goals like price stability and full employment. However, the effectiveness of capital expenditure as a fiscal policy tool for stabilising the economy has not been recognised by the federal government or its economic institutions. Increased capital investment on projects boosts government, commercial, and market activity, bringing in money for the federal government. Avocation of additional budgeted money into recurring expenditures when the capital expenditure budget is beset by financial constraints is one of the fiscal policy difficulties facing the federal government. (John, 2017)

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Theoretical Review

Wagner's Theory

According to the theory put forth by prominent German political economist Adolph Wagner, there is a straight link between the expansion of regulatory action and economic improvement. He thought that the core engine behind of economic expension in industrialising nations was social advancement. Law enforcement and material production were the two categories into which Wagner separated government operations. According to his argument, the necessity to supply economic products that private companies are unable to supply leads to a rise in government spending. The lack of a thorough analytical framework, its diminished applicability in the majority of Western countries, and its failure to take into account the substantial impact that war situations have on public spending are some of Wagner's theory's drawbacks.

Wiseman – Peacock Theory

The theory put forth by Jack Wiseman and Allan Peacock contends that increases in government spending are not steady and uninterrupted, but rather occur in jerks and steps. They contend that during periods of depression or societal disorders such as war, the current level of public revenue is insufficient to cover the expenses, hence limiting the growth of spending. This leads to a "displacement effect" in which the previous level of spending and revenue (taxation) is raised. As a result, the government must examine its revenue position in order to fund the additional spending. New stability is created when people accept new taxes (tax tolerance), which raises revenue and spending levels. However, this stability could be overtaken by another disruption. In comparison to state and local governments, the central government grows more quickly as a result of the disruption that leads to higher taxes and spending.

Empirical Review

John (2017) investigated the effect of Federal Government Capital Expenditure on Nigeria's economic growth from 1985 to 2014 using time series data from the Central Bank of Nigeria's Statistical Bulletin. The data was analysed using multiple regression analysis in conjunction with the ex-post facto study approach. The assessment found that transfer expenditures, economic services, social community services, and administration all had a major influence on Nigeria's economic progress.. While spending on social and community service increased GDP levels, lower GDP figures were associated with economic services, administration costs, and transfer payments. Government capital spending has a direct impact on the growth of the national economy, according to the research team. However, they recommend boosting budgetary funding for these sectors with a focus on maximising efficiency in order to maintain growth trends. The study contributes to the body of knowledge regarding government spending plans for economic growth.

Bredino Fiderikumo and Dikeogu's (2023) study looks at how government spending affects inflation rates globally and in Nigeria. The Central Bank of Nigeria (CBN) provided time series data for the study between 1981 and 2021. Data stationarity and co-integrating

equations are tested in the study using the Johansen co-integration test and the Augmented Dickey Fuller (ADF) unit root test. Although not statistically significant, the findings indicate a favourable correlation between government revenue and spending and inflation rates. Furthermore, the gross domestic product and inflation have a slight but favourable correlation. In order to prevent inflationary pressure and its detrimental impacts on the welfare of its citizens, the study advises the Nigerian government to exercise caution while implementing fiscal policy measures.

Oyekanmi & Adeleke (2023) and Adam and Hamidu (2023) both studied the connection between Nigerian inflation and government spending. In their work, Adam and Hamidu analysed data from 1980 to 2020 using an econometric model. The findings indicated that government spending has a positive effect on inflation, indicating that higher spending causes inflation to rise. The relationship was investigated in Oyekanmi & Adeleke's (2023) study using annual time series data from 1980 to 2019. Both research indicated a favourable long-run link between government expenditure and inflation, with government spending having a beneficial short-term influence. The study focusses on policies that encourage economic growth to lower inflation and advises exercising prudence while raising government spending to prevent future increases in inflation. Both studies emphasise the necessity of strong policies to stop Nigeria's inflation from getting out of control.

According to Paudel's (2023) research, the sum of capital and recurring expenditures had no appreciable effect on economic growth, disproving the notion that capital investment is more important to economic growth than recurring expenditure. The study also concluded that capital or ongoing investments in education would boost economic expansion. Adu et al. (2014) investigated how government expenditure affected Ghana's economic growth using the paired Granger test and Wagner's hypothesis. The study found that while government spending has a short-term negative impact on economic growth, it has a long-term favourable benefit. Paying taxes was blamed for this as, in the near term, taxes would impact output because they create distortions that hinder economic growth when the government utilises them to fund its operations.

Modebe et al. (2012) found that only expenditure had a positive effect on economic growth, while both capital and recurrent expenditure had an insignificant impact. They used multiple regression analysis to investigate the effects of capital and recurrent expenditure on Nigeria's economic growth using data spanning 1987 to 2010. repeating Using Ordinary Least Square (OLS) analysis, Muritala et al. (2011) investigated the relationship between Nigeria's economic development from 1970 to 2008 and government capital and recurring spending. GDP is directly impacted by investment and consumption spending, based on the data available for the investigation. It is crucial to suggest that the government take commercialisation and private sector involvement into account in order to guarantee efficiently allocated resources (Darkoh, 2014).

George and Bosco's (2020) study looked at how government expenditures affected Nigeria's inflation rates from 1999 to 2019. The Autoregressive Distributed Lag model was the primary analysis tool, and the data came from the CBN statistical bulletin. In the short term, the analysis discovered a positive but

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negligible correlation between government spending and inflation rates. The inflation rate associated with government spending was statistically significant and negative over the long term. In the near run, the money supply and inflation rates had a negative and negligible relationship. In order to keep inflation rates under control, the report suggested that the government use discretion in spending.

The study by Gbadebo (2023) examined the relationship between state spending and inflation in Nigeria using time series analysis. The analysis found a high and positive correlation between government spending and inflation for the years 2000–2022. State spending increased in parallel with an increase in the general level of prices in Nigeria. However, a short-term deviation from the long-term equilibrium relationship between the two variables was also discovered by the study. The findings suggest that in order to avoid inflationary pressures, governments should restrict public spending, especially in the near future. The study contributes to the corpus of knowledge on public spending, inflation, and economic policy in Nigeria and offers useful data to assist policymakers in formulating sensible economic strategies.

Chih-Hung Liu, Hsu, and Younis (2008) examined the causal link between GDP and public spending for the US federal government using time series data spanning 1974 to 2002. They discovered that total spending does contribute to GDP growth, in line with Keynesian theory. However, Wagner's law asserts that GDP growth is not equivalent to a rise in overall public spending. Using time series data on Jordan from 1990 to 2006, Mwafaq (2011) examines the relationship between governmental spending and economic growth. The results support Keynes' theories by showing that total government spending increases GDP growth. Mansouri (2008) investigated how fiscal policy and economic growth relate to each other in three North African nations: Egypt, Morocco, and Tunisia. The analysis found a positive correlation between public spending and real GDP, with a one percent increase in public spending increasing real GDP by 1.26 percent in Morocco, 1.15 percent in Tunisia, and 0.56 percent in Egypt.

Oyeleke, Raheem, and Falade (2016) looked into the relationship between disaggregated functional capital spending and economic growth in Nigeria from 1970 to 2013. Error correction was used to estimate economic growth and capital expenditure data. Long-term relationships between public spending components and economic growth were demonstrated by the study's findings. The research continued by demonstrating that government expenditures on functional capital that had been broken down did not result in the required growth of real economic activity. However, the analysis showed that capital spending on economic services had a negative and insignificant correlation with economic growth, and that the inflation rate had a positive coefficient. Rosoui (2015) investigated in a different study the connection between Romania's economic growth between 1995 and 2013 and capital and current expenditures. The study employed the vector autoregression model for data estimation. Although the study discovered a strong and positive correlation between capital expenditure

and real gross domestic product—that is, that rising capital expenditures spur economic growth—it also discovered that real gross domestic product decreased when current expenditures rose.

METHODOLOGY

An ex-post facto research design was used in this investigation. Ex-post facto design often includes the analysis of independent and dependent variables. Because of this, it is impossible to alter any of the factors. Data on the variables are already accessible from several trustworthy sources, such as the CBN statistical bulletin. The secondary sources of data used in this study include articles from the Central Bank of Nigeria's (CBN) 1991–2023 Statistical Bulletin. The data presented comes from the following sources: Government Transfers Expenditure, Economic Services Expenditure, Social and Community Services Expenditure, Administration Expenditure, and Inflation Rate.

Model Specification

The variables included in the research objectives of the study are taken from Oziengbe's (2013) study, and the model specification was changed as follows:

INFR = F (ADMX, ECMX, SCMX, GTRX)

β_1, β_2, and β_3.

μ = error term/stochastic variable

…….1

Inflation rate is a function of capital expenditures made by the federal government in the fields of administration, economic services, social community service, and transfers, as indicated by the previously mentioned linear function in number 1. It also shows that Nigeria's inflation rate is determined by the capital expenditures made by the federal government on these four separate factors. The linear function was converted into an econometric function in this manner:

$INFR = \beta_0 + \beta_1 ADMX + \beta_2 ECMX + \beta_3 SCMX + \beta_4 GTRX + \mu$……2

Where;

ADMX stands for Administration Expense.

Social And Community Services Expenditure is represented by SCMX,

Economic Services Expenditure by ECMX,

GTRX stands for Government Transfer Spending.

Rate of inflation is INFR.

β_0 is the value of y, or the intercept, when the independent variables are taken to be zero.

Parameters or independent variables' coefficients are

RESULTS AND DISCUSSION

Table 1: Descriptive Statistics

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	INFR	ADMX	ECMX	SCMX	GTRX
Mean	19.0203	231.9858	415.9005	111.4681	154.3709
Median	12.2	185.2243	320.9	78.68134	59.7
Maximum	76.8	1130.643	1960.733	540.0636	854.767
Minimum	0.2	3.345	2.3367	1.4917	0
Std. Dev.	16.68887	253.2098	423.3244	120.8917	195.1936
Skewness	2.129706	1.801131	1.95447	1.756334	1.960461
Kurtosis	6.856637	6.410942	7.067249	6.332268	6.71897
Jarque-Bera	45.39732	33.83988	43.7557	32.23391	40.15602
Probability	1.39E-10	4.49E-08	3.15E-10	1.00E-07	1.91E-09
Sum	627.67	7655.531	13724.72	3678.449	5094.24
Sum Sq. Dev.	8912.586	2051687	5734512	467674	1219217
Observations	33	33	33	33	33

***Source**: Author's computation, 2025.*

Note: Rate of Inflation (INFR), ADMX stands for Administration Expense, Social and Community Services Expenditure (SCMX), Economic Services Expenditure (ECMX), and Government Transfers Expenditure (GTRX)

The behavior patterns of inflation rates in Nigeria along with capital expenditure categories are represented in Table 1 over 33 years. Nigeria faces a long-standing economic challenge because its inflation rates have averaged at 19.02% throughout the years. High inflation has touched its maximum at 76.8% during specific periods indicating critical economic problems within the country. The government consistently dedicated the largest portion of its budget to Economic Services Expenditure since 1981 which may have supported infrastructure development and agricultural growth and transportation improvements. The high-level government spending did not successfully reduce inflation levels. Variations in Administration Expenditure and Government Transfers Expenditure point to unstable and possibly ineffective government spending practices. Economic volatility might result from the budget's fluctuating expenditure amounts across all parts and its widely pronounced peaks within these amounts. The descriptive statistical analysis indicates that sporadic or wasted capital spendings contribute to rising inflation rates and prolong Nigeria's ongoing economic troubles.

Table 2: Pearson Correlation Matrix

	INFR	ADMX	ECMX	SCMX	GTRX
INFR	1	-0.17257	-0.19526	-0.16847	-0.06875
ADMX	-0.17257	1	0.987952	0.991684	0.930424
ECMX	-0.19526	0.987952	1	0.983082	0.944998
SCMX	-0.16847	0.991684	0.983082	1	0.912766
GTRX	-0.06875	0.930424	0.944998	0.912766	1

***Source**: Author's computation, 2025.*

Table 2 displays the relationship between inflation and the different categories of capital expenditure in Nigeria from 1991 to 2023. All categories—Administration, Economic Services, Social and Community Services, and Government Transfers—show weak and negative correlations with inflation. The increase in capital spending by the government across these sectors demonstrates no proportional relation to rising or falling inflation rates. Rising government capital spending in Economic Services Expenditure by -0.195 and Administration Expenditure by -0.173 tends to slightly decrease inflation rates although the relationships remain insignificant. A very strong positive relationship has been observed between all categories of spending within the sample data which demonstrates these budgets typically grow or decrease together. There exists an apparent budgetary pattern indicating that budget increases in one sector correspond to parallel increases in other sectors. The correlation matrix indicates that capital expenditure rise has minimal direct effects on inflation rates despite being ineffective at stabilizing the economy.

Table 3: ARDL Estimation Results for Inflation and Government Expenditure

Dependent Variable: INFR

Method: ARDL

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
INFR(-1)	0.721638	0.130657	5.523167	8.50E-06
ADMX	0.0041	0.073734	0.055606	0.95608
ECMX	-0.06699	0.036367	-1.8421	0.076895
SCMX	0.158763	0.135517	1.171536	0.252008

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Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GTRX	0.044101	0.035171	1.253906	0.221034
C	7.904033	4.563481	1.732018	0.09512
R-squared	0.641198	Mean dependent var		18.89594
Adjusted R-squared	0.572198	S.D. dependent var		16.94036
S.E. of regression	11.08011	Akaike info criterion		7.815541
Sum squared resid	3191.991	Schwarz criterion		8.090367
Log likelihood	-119.049	Hannan-Quinn criter.		7.906638
F-statistic	9.292683	Durbin-Watson stat		1.248607
Prob(F-statistic)	3.60E-05			

***Source**: Author's computation, 2025.*

The ARDL regression findings reveal which government capital expenditure aspects have affected Nigerian inflation rates during the period from 1991 to 2023. Data indicates that an earlier version of inflation proves statistically significant as it demonstrates the tendency for inflation to persist across time periods. None of the expenditure variables exhibit significance in relation to inflation rates at the 5% level. The results indicate that Economic Services Expenditure shows negative effects on inflation (-0.06699) although the significance level (p=0.076) approaches borderline significance. Results show Administration Expenditure as well as Social and Community Services alongside Government Transfers Expenditure produce no significant impact on lowering inflation in Nigeria. The R-squared value of 0.64 indicates that the model's variables successfully account for 64% of changes in inflation. The present capital expenditure methods in Nigeria do not effectively contribute to inflation control according to research results

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Table 4: Bounds Test for Cointegration

Null hypothesis: No levels relationship	
Number of cointegrating variables: 4	
Trend type: Rest. constant (Case 2)	
Sample size: 32	
Test Statistic	Value
F-statistic	1.2743283 34028127

The check performed by The Bounds Test demonstrates whether inflation and Nigeria's government capital expenditure categories share a long-lasting relationship. A reported F-statistic value of 1.27 fails to reach the critical values needed for concluding cointegration between variables. Quantitative assessment indicates that the null hypothesis of non-existence between the two variables should remain intact. The test results show inflation in Nigeria maintains its independence from both Administration and Economic Services and Social and Community Services and Government Transfers Expenditure in the long run. To determine its importance this result shows that government capital spending alterations do not lead to sustained inflation outcomes. According to available data and practices of government capital expenditure in Nigeria these policy tools fail to deliver effective long-term solutions against inflationary trends in the economy.

Table 5: Bounds Test Critical Values for Cointegration

	10%		5%		1%	
Sample Size	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
30	2.525	3.56	3.058	4.223	4.28	5.84
35	2.46	3.46	2.947	4.088	4.093	5.532
Asymptotic	2.2	3.09	2.56	3.49	3.29	4.37

I(0) and I(1) are respectively the stationary and non-stationary bounds.

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The critical values provided by the Bounds Test establish if inflation holds a long-term connection to government capital expenditure. The research employs 32 observations as its baseline for determining the significant figures between 30 and 35. The critical I(1) values available for 5% significance fall within the interval from 4.088 to 4.223 and the I(0) critical values exist between 2.947 to 3.058. The findings from the Bounds Test present an F-statistic value of 1.27 which lies below both upper and lower bound values leading to non-rejection of the null hypothesis. The F-statistic value exceeding 1.27 proves that inflation variables do not exhibit any long-term relationship with Nigeria's capital expenditure components. The government expenses in administration and economic services and social and community services and transfers have not produced any permanent effect on Nigerian inflationary patterns. Modern capital expenditures in Nigeria demonstrate insufficient effectiveness to serve as sustainable long-term solutions for inflation management

Table 6: Heteroskedasticity Test: Breusch-Pagan-Godfrey

Null hypothesis: Homoskedasticity

F-statistic	5.557746	Prob. F(5,26)	0.001303
Obs*R-squared	16.53208	Prob. Chi-Square(5)	0.005478
Scaled explained SS	18.11364	Prob. Chi-Square(5)	0.002807

***Source**: Author's computation, 2025.*

The Breusch-Pagan-Godfrey test helps determine if model errors maintain a consistent variance (homoskedasticity) throughout observations or if they present changes (heteroskedasticity). Statistical evidence from the F-statistic value of 5.56 and p-value of 0.0013 leads to the rejection of homoskedasticity at a 5% significance level. A significant amount of evidence demonstrates the model contains heteroskedasticity since its residuals exhibit temporal changes in variability. The Obs*R-squared value together with its p-values of 0.0055 and scaled explained SS with 0.0028 prove the model contains heteroskedasticity. Non-constant error term variance in the model implies unreliability of standard errors along with test statistics. To maintain the validity of regression output during policy-based analysis of Nigerian capital expenditure and inflation research one needs to incorporate alternative standard error models (such as robust standard errors).

Table 7: Test Equation Results for Inflation and Government Expenditure

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	19.16096	57.73298	0.331889	0.742634

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INFR(-1)	6.669976	1.652947	4.035203	0.000426
ADMX	-0.46262	0.932818	-0.49594	0.624102
ECMX	-0.31609	0.460088	-0.68701	0.498157
SCMX	1.283185	1.714437	0.748459	0.460901
GTRX	0.343772	0.444945	0.772617	0.446716
R-squared	0.516627	Mean dependent var		99.74972
Adjusted R-squared	0.423671	S.D. dependent var		184.6446
S.E. of regression	140.1754	Akaike info criterion		12.89103
Sum squared resid	510877.8	Schwarz criterion		13.16585
Log likelihood	-2.00E+02	Hannan-Quinn criter.		12.98212
F-statistic	5.557746	Durbin-Watson stat		2.691948
Prob(F-statistic)	0.001303			

***Source**: Author's computation, 2025.*

An analysis of the regression data reveals how inflation connects to varied forms of public capital spending. The analysis shows a statistically significant positive relationship between past inflation and current inflation through the INFR(-1) variable because the coefficient value reached 6.67. Statistically significant results show past inflation successfully predicts current inflation because the t-statistic reaches 4.04 and maintains a very small p-value (0.000426). Statistical significance at the 5% level does not exist for any of the capital expenditure components including Administration (ADMX) and Economic Services (ECMX) and Social and Community Services (SCMX) and Government Transfers Expenditure (GTRX) since their p-values remain above 0.05. The research shows that inflation in Nigeria does not seem to significantly depend on changing government spending levels in the short term. The model effectively explains 52 percent of inflation variations but the residuals show no autocorrelation issues since the Durbin-Watson statistic is 2.69. The results indicate that inflation continues to exist in the long term but government capital expenditures fail to produce meaningful short-term inflation changes

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Table 8: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
ADMX does not Granger Cause INFR	31	0.325497	0.725068
INFR does not Granger Cause ADMX		0.424616	0.658475
ECMX does not Granger Cause INFR	3.10E+01	5.19E-01	6.01E-01
INFR does not Granger Cause ECMX		0.981975	0.388037
SCMX does not Granger Cause INFR	31	0.046926	0.954239
INFR does not Granger Cause SCMX		0.172737	0.842317
GTRX does not Granger Cause INFR	31	0.256814	0.775451
INFR does not Granger Cause GTRX		0.416366	0.663758
ECMX does not Granger Cause ADMX	31	0.262553	0.7711
ADMX does not Granger Cause ECMX		0.311595	0.734975
SCMX does not Granger Cause ADMX	31	1.192177	0.319614
ADMX does not Granger Cause SCMX		2.536876	0.098523
GTRX does not Granger Cause ADMX	31	1.655325	0.210534
ADMX does not Granger Cause GTRX		2.579577	0.095069
SCMX does not Granger Cause ECMX	31	1.269912	0.297705
ECMX does not Granger Cause SCMX		1.460443	0.250555
GTRX does not Granger Cause ECMX	31	1.820495	0.18199
ECMX does not Granger Cause GTRX		2.459396	0.105138
GTRX does not Granger Cause SCMX	31	2.275952	0.122788

SCMX does not Granger Cause GTRX	2.522257	0.099736

Source: *Author's computation, 2025.*

This test examines the influences between inflation rate changes and different government capital spending sectors with the help of a directional relationship analysis. The research reveals that none of the expenditure categories including Administration (ADMX), Economic Services (ECMX), Social and Community Services (SCMX) and Government Transfers Expenditure (GTRX) function as Granger causes for inflation due to significant p-values (all exceeding 0.05). The evidence indicates that government spending variations happen after inflation movements thus demonstrating that capital spending does not lead to inflation increases within the Nigerian context. The analysis confirms that inflation plays no direct role in shaping government spending changes because reverse causality between these elements shows statistical insignificance. The research fails to establish Granger causality between Inflation and Capital Expenditure data points therefore indicating that the link between government spending and inflation exceeds direct short-term impact mechanisms

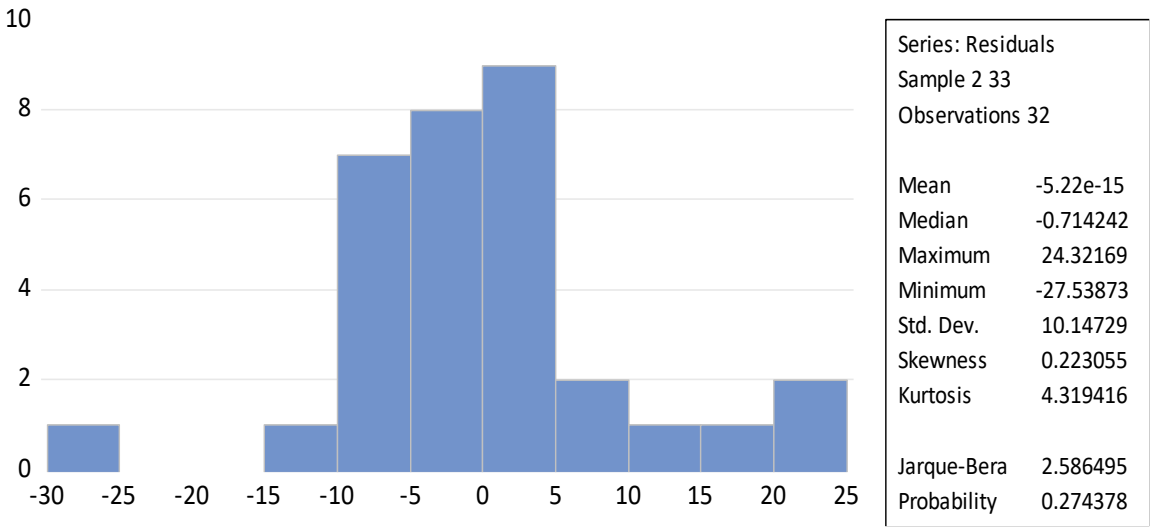

Figure 1

According to the histogram analysis combined with the Jarque-Bera test results the estimated residuals follow approximately a normal distribution pattern. The Jarque-Bera statistic value reaches 2.586495 while its p-value stands at 0.274378 and exceeds 0.05 thus revealing no sufficient evidence to reject the hypothesis of normality. The behavior of residuals in the model supports valid regression results and strengthens confidence about how the model predicts Nigeria's inflation rates

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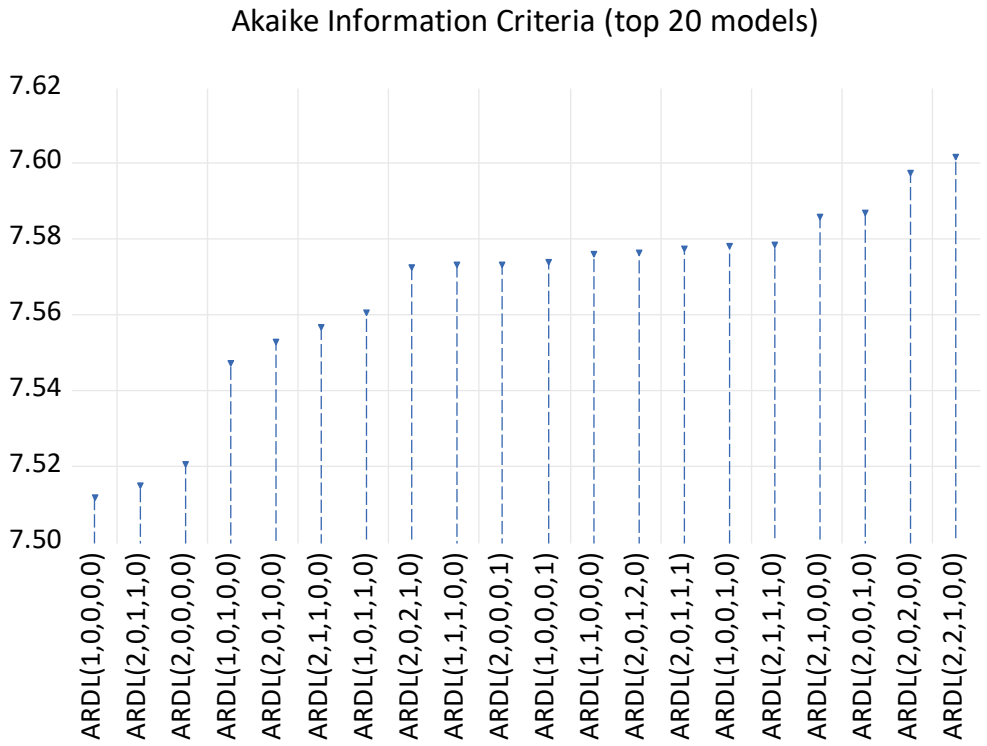

Figure 2

The ARDL(1,0,0,0) model stands as the primary selection because it possesses the smallest Akaike Information Criterion (AIC) value from among the 20 potential choices. The model shows an optimal relationship between complexity and fitting accuracy. The study selects the model featuring the minimum AIC value to achieve accurate predictions about capital expenditure components' impact on Nigerian inflation rates. A model with minimal components helps analysts better understand its operations while providing sound conclusions that reduce policy uncertainty.

Discussion of findings

A research analysis studied the inflation effects on Nigeria between 1991 and 2023 where government capital expenditures divided into administration, economic services, social/community services, and transfers were investigated. The research results show that inflation rates have remained high during the entire study period at an average of 19.02% but capital expenditure items show minimal and non-significant statistical connections to inflation. The current configuration of capital expenditures displays limited ability to combat inflation throughout Nigerian economy.

The research findings of John (2017) regarding capital expenditure categories on economic growth from 1985 to 2014 create a strong background for understanding these results. The study conducted by John established that administrative and social/community services capital expenditures led to increased GDP but economic service and transfer payments created economic difficulties. The research presents different results compared to the present study since it reveals a negative but weak connection between all expenditure

components and inflation including a slightly significant negative impact of economic services expenditure (p = 0.076). Different types of capital investment can improve economic growth yet they may not simultaneously address inflationary pressures because these considerations must be harmonized with economic realities.

The findings regarding the positive but insignificant relationship between government spending and short-run inflation are consistent between Bredino and Dikeogu (2023) and George and Bosco (2020). The research output matches this study by demonstrating that capital project-based fiscal interventions typically fail to bring immediate anti-inflationary benefits. Gbadebo (2023) together with Adam and Hamidu (2023) discovered a strong significant positive connection between government expenditure and inflation which demonstrates fiscal policy's ability to create inflation during short term periods. The findings from this study are statistically insignificant because the economy potentially faced variations in fiscal control together with changes in expenditure quality and overall absorption capabilities over the study period.

This finding of Paudel (2023) about non-significant relations between government spending and economic growth supports the broad conclusion of this study demonstrating that capital expenditure volumes alone cannot lead to desired macroeconomic results unless spending targets receive proper performance management. Modebe et al. (2012) together with Muritala et al. (2011) discovered that government expenditure had a feeble impact on economic performance according to their respective research findings.

The findings oppose previous research by John (2017) which showed capital expenditure yielding growth benefits because these current expenditure patterns do not lower Nigerian inflation. The different study outcomes show the complicated nature of how fiscal policies impact economic development and emphasize the requirement for coordinated capital spending procedures which support economic growth and stable prices.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The research inspected how different parts of government capital spending influenced Nigeria's inflation levels during the period ranging from 1991 to 2023. Both analysis and practical evidence show that overall inflation levels in Nigeria remain consistently elevated regardless of capital expenditure levels. The analysis reveals a minor negative relationship between economic services spending and inflation while the other studied categories fail to show notable effects on current inflation rates. The situation shows Nigeria requires fiscal policies which precisely match the government's spending to macroeconomic stability approaches for enduring control of inflationary issues. Through proper capital expenditure management together with effective strategic allocation Nigeria can improve both its inflation control ability and long-term economic growth potential.

Recommendations

1. To achieve macroeconomic stability while minimizing waste the government needs to enhance the administrative expenditure system.

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2. The government should allocate economic services funds toward infrastructure projects and productivity-generating sectors to decrease inflation.
3. Such funds from social and community services should serve dual purposes of bettering welfare together with securing enduring stability.
4. Government transfers need monitoring while having their alignment with productivity-enhancing programs to stop inflationary effects.

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