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Original Research Article

The Effect of Fiscal Policies on Nigeria's Inflation Rate

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Abstract: This study examines the effect of fiscal policies on inflation in Nigeria, while the specific objectives are to examine: (a) the effect of Federal Government Total Expenditure (FGTE) on inflation, (b) the influence of Total Government Debt (FGTD) on inflationary trends, and (c) the combined impact of exchange rate (EXR) fluctuations and fiscal variables on inflation. The study utilised secondary data from 1986 to 2024, sourced from the World Bank development indicators, CBN statistical bulletins, and the Bureau of Statistics, and analysed with E-view software. The Error Correction Model (ECM) was the primary analytical tool used to explore both long-run and short-run dynamics through the vector error correction model (VECM). The study identified Inflation (INF) as the most stable variable, while Government Expenditure (FGTE) shows the highest volatility. Also, there is a significant and statistically reliable long-term relationship between fiscal policy (expenditure and debt) and inflation. This study will be useful to financial stakeholders, including the Government, deposit banks and the CBN, which will use its findings to improve fiscal policies against inflation, price stabilisation, and for researchers in the finance field.

Keywords: Federal Government Total Expenditure, Federal Government Total Debt, Exchange Rate, Inflation

1. Introduction

Fiscal policy involves government actions to adjust fiscal aggregates like spending and tax revenues to achieve specific economic objectives, distinguishing it from other areas of public finance that focus on the impacts of individual government expenditures and taxes

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(Stein, 1968). Inflation refers to a prolonged rise in the general price level, leading to decreased purchasing power and changes in resource allocation, aimed at promoting economic stability. Fiscal policy can be either expansionary, involving increased spending or tax cuts, or contractionary, involving spending cuts or tax increases (World Bank, 2023). Recently, high inflation has persisted globally, leading to increased food and energy prices. This can be traced back to the recent COVID-19 pandemic (Victor, 2021). In response to this, national central banks are increasing their interest rates to reduce inflation. For instance, the UK raised its rate from 3.5% to 4.0%, and the US from 4.5% to 4.75%, while Nigeria's rates went from 16.50% to 17.50%, with Brazil keeping its rates steady at 13.75% (WDI, 2023). In Nigeria, the Central Bank of Nigeria (CBN) increased interest rates and set limits on weekly cash withdrawals—N5,000,000 for corporate accounts and N500,000 for individuals—in response to rising inflation. Moreover, the CBN introduced redesigned N200, N500, and N1,000 notes to curb illegal cash hoarding outside banks (CBN, 2024). Fiscal policy is essential for stimulating economic growth and stability, as monetary measures can be costly and detrimental. Governments utilize fiscal policy to manage allocation and spending, influencing inflation and overall economic health (Ozurumba, 2012). Key tools include taxes, public borrowing, and government expenditure, with increased spending or tax cuts potentially raising aggregate demand and inflation. Conversely, reducing deficits can lower inflation, lessening the necessity for Central Bank intervention (Daniels, Panetta and Penny, 2023). Fiscal policy plays a vital role in economic growth and stability through taxes, public borrowing, and government spending. In Nigeria, high inflation is intensified by ineffective policies and external factors such as the Russia-Ukraine conflict and COVID-19. The government has implemented stimulus measures, including budget changes, tax relief, welfare programs, and a minimum wage increase, which affect money supply and inflation (Udoh & Kokoette, 2023; Debt Management Office, 2024). Also, public debt has been proven to influence economic growth, which spurs inflation (Mbadiwe & Nwoba, 2023). Studies such as Ojong, Anthony & Arikpo (2016) and Ebimobowei & Ebiringa (2012) indicate that high tax burdens can reduce profitability and discourage investments, whereas a fair tax system may improve private sector performance and foster economic growth. Research indicates that effective taxation leads to economic growth by providing substantial government monetary injections (Mbadiwe & Nwoba, 2024).

Statement of Problem

Nigeria is experiencing persistent inflation, impacting purchasing power and economic planning (Guobadia, Omoruyi & Ugoh, 2023). While monetary policy is often highlighted, fiscal policy plays a crucial role in influencing inflation dynamics, as shown in various studies (Okeke, 2024; Akabua et al., 2025). Nigeria's structural vulnerabilities arise from high recurring expenditures, persistent fiscal deficits, dependence on oil revenues, and weak tax bases. Onwioduokit (1996) indicates that since the 1970s, government spending has often surpassed revenues, leading to inflation driven by fiscal deficits. Similarly, Medee & Nenbee (2012) highlight a notable correlation between inflation rates and the scale of fiscal deficits. Nigeria is experiencing high and volatile inflation, affecting consumer

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purchasing power and household welfare. Recent fiscal measures, including fuel subsidy reforms and tax adjustments, yield uncertain impacts on inflation amid ongoing structural reforms since 2022. These changes affect inflation through shifts in aggregate demand and rising production costs, depending on fiscal composition and monetary policy coordination. Empirical evidence reveals a mixed relationship between fiscal expansions and inflation, often missing the effects of recent policies, thus creating gaps in understanding their current influence (Atan & Effiong, 2021; Olaoye et al., 2024; Otto & Ukpere, 2015; Olasunkanmi, 2015). Failure to stabilize inflation in Nigeria due to volatile government expenditure threatens macroeconomic equilibrium. Deficit-financed public spending drives inflationary pressures and destabilizes purchasing power. Exploring fiscal consolidation strategies is crucial for sustainable price stability. This study analyzes fiscal-inflation dynamics in Nigeria to inform effective policy synchronization against the challenge of balancing fiscal expansion with low inflation. This study is significant because it bridges the empirical gap on how recent fiscal expansions and structural reforms (2022–2025) influence inflation in Nigeria. It provides a practical fiscal framework for the CBN and the Federal Government to synchronize monetary and fiscal policies that mitigate fiscal shocks and enhance price stability, ensure public spending stimulates growth without eroding household purchasing power and destabilizing the macroeconomic environment.

The main objective of this study is to examine the effect of fiscal policies on the rate of inflation in Nigeria, while the specific objectives are to: (a) evaluate the impact of Federal Government Total Expenditure (FGTE) on inflation in Nigeria; (b) examine the influence of Total Government Debt (FGTD) on inflationary trends in Nigeria; and (c) analyze the combined effect of exchange rate (EXR) fluctuations and fiscal variables on inflation in Nigeria. The study's importance will be felt by financial stakeholders, including the Government, deposit banks and the CBN, which will use its findings to improve fiscal policies against inflation, price stabilization, and for researchers in the finance field. The study, undertaken from 1986 to 2024, used these key variables: deficit financing, government expenditures and inflation rates. This study has five (5) sections: the introduction, literature review, research methods, data analyses and interpretations, and finally, conclusions and recommendations.

2. Literature Review

Review of Concepts

Fiscal policy

The concept of fiscal policy was first used by British economist John Keynes in his book, The General Theory of Employment, Interest and Money, in 1936. Modern fiscal policy, rooted in the Keynesian paradigm, posits that government spending can counterbalance shifts in private sector demand (Keynes, 1936). He emphasized the necessity for government intervention through fiscal stimulus during the Great Depression to mitigate economic downturns and achieve full employment. Fiscal policy encompasses the strategic use of government revenue and spending to impact aggregate demand, resource distribution, and income levels within an economy (Ahuja, 2019). According to

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Babalola (2015), fiscal policy refers to government actions that influence its revenue and expenditure, representing net receipts, surplus, or deficit. It can also address fluctuations in private consumption and investment through counter-cyclical adjustments in public spending and tax revenues. Fiscal policy has since evolved to encompass not just short-term stabilization but also structural and developmental objectives, particularly in developing nations like Nigeria (Iyoha, 2017; Olayungbo & Akinlo, 2016). Also, fiscal policy can directly and indirectly influence exchange rates, deficit levels, capital expenditures, interest rates, and personal spending (Schmidt, 2018).

Public Expenditure

Public expenditure encompasses government expenses for maintenance, the economy, and society, benefiting external bodies and other countries, including all costs incurred by the public sector. (Bhatia, 2009; Nwamuo, 2022). Musgrave and Musgrave (1989) emphasized the crucial role of public expenditure within the economy, covering majorly resource allocation, income distribution, and economic stabilization, reflecting the government's fiscal commitment to social and economic objectives. Chinwoke (2014) categorized public expenditure into recurrent and capital expenditure for efficient fiscal management. Recurrent expenditures include regular salaries, essential services, and administration, while capital expenditures involve large-scale capital projects like buildings and infrastructure, forming the basis of a nation's physical development.

Inflation Rate

Inflation rate is the percentage change in the general price level of goods and services over time, indicating a decrease in money's purchasing power. It is measured by indices like the Consumer Price Index (CPI) and Producer Price Index (PPI), reflecting average price movements in consumer and producer baskets (World Bank, 2023). Inflation rates describe a fall in money value is classified majorly into three types: demand-pull, cost-push, and expectation-driven, reflecting various macroeconomic pressures (Mankiw, 2021). Friedman (1970) asserts that inflation is fundamentally a monetary issue, stemming from a growth of the money supply that outpaces output. Inflation may inversely affect unemployment in the short term via the Phillips curve, but diminishes in the long run due to adaptive expectations (Blanchard & Johnson, 2013). However, moderate inflation can boost spending and mitigate nominal rigidities, while high or unstable inflation creates uncertainty, distorts resource allocation, and weakens investment choices (Mishkin, 2019). Central banks use inflation-targeting frameworks, adjusting interest rates and communicating effectively to ensure price stability. Key to this is accurately assessing inflation by distinguishing between headline and core inflation, the latter of which excludes volatile items like food and energy prices to reflect clearer trends. Inflation refers to a general rise in the price levels of a broad range of goods, not just specific commodities (OECD, 2022).

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Theoretical Literature

Quantity of Money Theory

The Quantity Theory asserts that price level (P) depends on money supply (M) relative to real output (Y), described by $M \times V = P \times Y$. With stable or slowly growing velocity (V) and output, increased money supply raises the price level, causing inflation (Fisher, 1911). Monetarists view excess demand and price rises as a result of money supply exceeding output. Friedman argues that a higher money supply creates an excess of real money balances, disrupting equilibrium, prompting increased public spending on goods and services to restore balance (Friedman, 1968). The Quantity Theory describes the inflationary effects of deficits financed through monetary expansion, where increased borrowing and money printing lead to higher prices. Friedman and Schwartz (1963) argue that ongoing deficit monetisation risks price stability without fiscal restraints. This theory applies to Nigeria, where the Central Bank has used "Ways and Means Advances" to finance fiscal deficits, thereby increasing the money supply. A study by Adeniran, Yusuf, and Adeyemi (2014) reveals that monetised deficits significantly impact inflation, especially amid oil revenue shortfalls, linking fiscal indiscipline to monetary accommodation in developing economies. Although there is generally a positive relationship between money supply growth and inflation, it can fluctuate based on country context and may weaken during financial crises. Recent critiques of the Quantity Theory of Money emphasise omitted factors like productivity and fiscal policy, particularly during quantitative easing when increased money supply did not lead to expected inflation rises. Thus, modern central banks prioritise interest rates over money supply, reducing QTM's influence on current monetary policy (Khan & Rashid, 2025; Foccacci et al., 2024; Avdiu & Unger, 2022; Jung, 2024; Machaj, 2023).

Demand-Pull Inflation Theory

The demand-pull theory of inflation explains that rising commodity prices occur when demand exceeds supply. Keynes (1936) attributes inflation to excess aggregate demand surpassing aggregate supply. When total demand—including consumption, investment, government spending, and net exports—exceeds productive capacity, firms increase prices. This situation usually coincides with economic growth, where heightened consumer spending, government expenditure, and investments push aggregate demand beyond the supply capabilities, resulting in demand-pull inflation, predominantly noted in the short run when supply is inelastic (Okon et al., 2023; Auerbach, 1976). Classical and neoclassical economists like Marshall, Walras, and Fisher recognised that an increase in money supply elevates total demand, resulting in higher price levels, emphasising that money supply dictates overall prices (Dastgerdi, 2020; Samuelson & Solow, 1960). Fiscal policy affects aggregate demand via government spending and taxation. Expansionary policies can raise demand and prices under capacity constraints, while contractionary policies combat inflation by reducing demand. In Nigeria, expansionary measures, such as increased spending, worsen inflation due to high oil revenues that elevate demand beyond

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supply limits, resulting in demand-pull inflation rather than genuine growth (Onyele & Nwokocha, 2022).

Structural Theory of Inflation

The Structuralist Theory of Inflation contends that inflation primarily arises from shortages in money supply and resource underutilisation, challenging monetarist and Keynesian views by focusing on structural factors like economic imbalances prevalent in developing countries. It stresses that limited food production and increased money supply do not alone drive inflation, especially in Latin America (Fischer & Mayer, 1981). Influenced by economists such as Raúl Prebisch, the theory links inflation to economic rigidities rather than merely monetary issues (Prebisch, 1950; Noyola, 1956; Sunkel, 1958). Structural bottlenecks, fiscal deficits financed through inflationary taxation, and ineffective resource use are also highlighted as critical components (Chhibber, 1989; Olivera, 1964). Proponents advocate for reforms in agricultural practices and fiscal policies to stabilise prices, criticising contractionary monetary policies for hindering productivity (Bacha, 1982; Taylor, 1990; Chichilnisky, 1984). To combat inflation in Nigeria, enhancing productive capacity, improving supply responses, and reducing external vulnerabilities through agriculture and infrastructure investments is essential, while maintaining stable exchange rates. Inflation primarily results from supply-side factors such as exchange-rate devaluation and import reliance, rather than monetary aggregates (Akinbobola, 2012). Structural and institutional reforms, alongside monetary tightening, are essential for managing inflation in emerging economies. Critics argue that this approach may lack clear policy goals and overlook the impacts of monetary policy and external shocks, complicating the implementation of these reforms. Also, a focus on structural changes may reduce the importance of monetary stability and short-term measures (Bastian & Setterfield, 2017; Olivera, 1964; Raganrajan & Nachane, 2021; Suprinyak & Calvalho, 2025).

Theory of Public Spending

The public spending theory outlines government resource allocation via public expenditure and its effects on socioeconomic outcomes. This theory integrates classical, Keynesian, and welfare economics views. Keynes (1936) argued that inadequate total demand leads to lower output and employment, suggesting that government spending serves as a stabilisation tool. He advocated for expanded fiscal policy—higher government spending and lower taxes during recessions—to boost demand and achieve full employment, despite potential budget deficits. Public spending is thus viewed as an exogenous tool for managing economic cycles, aimed at reducing unemployment and fostering economic recovery (Albassam, 2020). Public expenditure plays a critical role in macroeconomic policy, aimed at resource allocation to achieve societal goals (Longo et al., 2024). Wagner (1883) noted that economic expansion leads to increased public expenditure in both absolute terms and as a percentage of national income, suggesting that wealthier nations tend to spend more. The public expenditure theory posits that such spending is essential for addressing market failures and enhancing the supply of public goods to maximise social welfare while ensuring efficiency and equity (Medema, 2023;

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Desmarais-Tremblay et al., 2023). Conversely, public choice theory examines public spending by highlighting political motivations and the selfish interests of political actors, resulting in government failures (Da Silva Arraes et al., 2024).

Empirical Literature

Research on the effect of fiscal policies on Nigeria's inflation rate shows mixed but insightful findings. Many studies indicate both negative and positive effects of fiscal policies in Nigeria. Duru and Uremadu (2024) examined the interplay between government expenditure, economic growth, inflation, and interest rates in Nigeria from 1986 to 2022, employing multiple regression and finding a positive relationship between total government expenditure and inflation, noting that as spending increased, the inflation rate tended to rise alongside it, while higher interest rates inversely affected economic growth. Hamadouche et al. (2024) revealed that while capital expenditure had no significant impact on inflation in the long run, recurrent expenditure had a positive and significant impact, suggesting that consumption-based government spending is a primary driver of price instability. It has also been observed that both fiscal and monetary policies synchronise to either curb inflation or heighten it. Studies such as Udoh and Kokoette (2023) and Nwosu et al. (2024) asserted that fiscal policy enhanced the stability of inflation. Udoh and Kokoette (2023) analysed the impact of fiscal policy measures on inflation rates in Nigeria using time series data from 1986 to 2021. The study identified Inflation Rate as the dependent variable and various fiscal policy tools as independent variables, including different types of government expenditures and taxes. Using the Autoregressive Distributed Lag (ARDL) method, the researchers found positive correlations between all independent variables and inflation rates. Nwosu et al. (2024) examined the link between fiscal deficit and inflation in Nigeria from 1980 to 2023, using the Autoregressive Distributed Lag (ARDL) technique and Granger Causality test and discovered that fiscal deficit significantly impacts inflation in the long run but has an insignificant inverse effect in the short run, with no causal relation identified. Further works also showed negative effects of government expenditure on inflation. Imoisi, Ajudua and Odishika (2023) analysed Nigeria's government expenditure and inflation from 1970 to 2020 using the ARDL technique. Their findings indicate that government expenditure negatively and insignificantly affects inflation in both the short and long run. Similarly, the exchange rate has a positive but insignificant impact on inflation. In contrast, money supply significantly and positively influences inflation in both time frames. Ebisine and Oki (2021) examined the effect of public expenditure on inflation in Nigeria from 1981 to 2018 using time series data, and employed the Error Correction Mechanism technique. Public expenditure was proxied into defence, transport and communication, health, education, and agriculture as independent variables, with the consumer price index as the dependent variable, revealing a long-run relationship among the variables. Findings showed that government expenditure had a positive yet insignificant impact on inflation, while expenditure on agriculture and health exhibited a negative and insignificant effect on inflation in Nigeria. Abubakar et al. (2014) examined the relationship between fiscal deficit and inflation in Nigeria from 1970 to 2011 using the ARDL approach and found a unidirectional causality from fiscal deficits to inflation, but the long-run

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relationship was statistically insignificant, while showing a significant long-run relationship between interest rates and inflation. No causality between inflation and exchange rates was found. The study concludes that sustained fiscal deficits do not drive inflation, with interest rates being the primary factor influencing inflation.

From the reviewed literature, there exists a significant deficiency in a consensus on the direction and significance between fiscal policies (government spending) and inflation in Nigeria. Studies such as Duru and Uremadu (2024) establish a positive correlation, indicating that spending drives inflation. In contrast, Imoisi et al. (2023) report a negative and insignificant effect, while Abubakar et al. (2014) argue that fiscal deficits do not influence inflation, citing interest rates as the more significant factor. Hence, this study aims to reconcile contradictions regarding effects of government spending, by determining where public spending shifts from being productive to inflationary, as well as, close the methodological gap by employing the VECM approach as against ARDL used by most reviewed works.

3. Research Methods

The study used secondary data from 1986 to 2024, sourced from the World Bank development indicators, CBN statistical bulletins, and the Bureau of Statistics, analysed with E-view software. The study utilised Ordinary Least Square (OLS) regression analysis to examine the influence of various variables. This method articulates the relationship between variables mathematically, employing multiple regression to illustrate the functional connection between dependent and independent variables. It included pre-estimation tests, such as the Augmented Dickey-Fuller unit root test and cointegration test along with post-estimation tests such as serial correlation test and heteroskedasticity test. The theoretical framework is based on Keynesian theory which recommends increased government spending and tax reduction during recessions to boost total demand. Conversely, during inflationary periods in an economic boom, it advocates for restrictive fiscal policies, including reduced spending and higher taxes, to decrease total demand and combat inflation. Based on the framework, the model takes a structural form as thus:

$INFL_t = f($FGTE, FGTD, EXR) …… *(1)*

Econometrically, equation (1) abPhillips-Perron$INFL_t = \alpha_0 + \alpha_1$ FGTE + α_2 FGTD + α_3EXR ..... *(2)*

Hence, the symbolic form of the model andbecomes;

IogINFL = $\beta_0 + \beta_1$*I*ogFGTE + $\beta_2$logFGTD + β_3*I*ogEXR + ε……. (3)

Where, log is the logarithm for of the variables.

INFL = inflation rate

FGTE = federal government total expenditure

FGTD = federal government total debt

EXR = exchange rate

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ε = error term

By economic expectation $\beta_1 > 0$, $\beta_2 < 0$, $\beta_3 > 0$

This means that it is expected a rise in government expenditure, public debt, and exchange rate will lead to rise in inflation.

Method of Data Analyses

The study utilises secondary data from 1986 to 2024 obtained from World Bank indicators, CBN statistical bulletins, and the Bureau of Statistics, analysed with E-view software. The analysis employed the Ordinary Least Squares (OLS) technique alongside stationarity tests like the Phillips-Perron (PP) and Augmented Dickey-Fuller (ADF) tests for variables integrated of order one (I(1)). The Johansen test was utilised to evaluate long-run equilibrium relationships. The Error Correction Model (ECM) was the primary analytical tool used to explore both long-run and short-run dynamics through the Vector Error Correction Model (VECM). Additionally, diagnostic tests were carried out for autocorrelation, heteroskedasticity, and stability.

Unit Root Test

Unit root tests, specifically the Augmented Dickey-Fuller (ADF) and Philip-Perron (PP) tests, are essential for analysing time series data to determine its stationarity, to ascertain the data's suitability for econometric analysis. Following these tests, a co-integration test will examine the long-term relationship between the variables.

The unit root model can be estimated as:

$$Y_t = \alpha_t + \beta Y_{t-1} + \sum_{j=1}^{k} \beta_1 \Delta Y^{i}_{t-1} + \varepsilon_t \quad \text{.....(4)}$$

Johansen Co-integration Test

The Johansen test expands on the Dickey-Fuller test by examining unit roots in linear combinations of multiple variables, enabling the estimation of all co-integrating vectors when more than two variables are present. With n variables showing unit roots, there can only be n-1 co-integrating vectors, which the test estimates. As with the Dickey-Fuller test, the existence of unit roots signifies that normal asymptotic distributions are not applicable.

Error Correction Model

Error correction models examine the long-term relationships between variables, where x is independent and y is dependent. They assess impact propensity, long-run propensity, and lag distribution of y as a function of x. An error correction term, derived from past values of x and y, adjusts future y towards equilibrium when overestimated.

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For estimation purposes, the model is thus:

$$\Delta INFL_t = a_0 + \sum_{i=1}^{k} a_1 \Delta INFL_{t-1} + \sum_{j=1}^{k} a_2 \Delta FGTE_{t-1} + \sum_{m=1}^{k} a_3 \Delta FGTD_{t-1} + \sum_{n=1}^{k} a_4 \Delta EXR_{t-1} + \rho_1 \Delta ECT_{t-1} + \mu_{1t} \quad (5)$$

$$\Delta FGTE_t = a_0 + \sum_{i=1}^{k} a_1 \Delta FGTE_{t-1} + \sum_{j=1}^{k} a_2 \Delta INFL_{t-1} + \sum_{m=1}^{k} a_3 \Delta FGTD_{t-1} + \sum_{n=1}^{k} a_4 \Delta EXR_{t-1} + \rho_1 \Delta ECT_{t-1} + \mu_{1t} \quad (6)$$

$$\Delta FGTD_t = a_0 + \sum_{i=1}^{k} a_1 \Delta FGTD_{t-1} + \sum_{j=1}^{k} a_2 \Delta INFL_{t-1} + \sum_{m=1}^{k} a_3 \Delta FGTE_{t-1} + \sum_{n=1}^{k} a_4 \Delta EXR_{t-1} + \rho_1 \Delta ECT_{t-1} + \mu_{1t} \quad (7)$$

$$\Delta EXR = a_0 + \sum_{i=1}^{k} a_1 \Delta EXR_{t-1} + \sum_{j=1}^{k} a_2 \Delta INFL_{t-1} + \sum_{m=1}^{k} a_3 \Delta FGTE_{t-1} + \sum_{n=1}^{k} a_4 \Delta EXR_{t-1} + \rho_1 \Delta ECT_{t-1} + \mu_{1t} \quad (8)$$

4. Data Analysis and Presentation

Descriptive Statistics

Descriptive statistics highlight the minor differences in dispersion within a dataset of 38 observations, with mean values of INF (2.71), FGTE (6.97), FGTD (8.07), and EXR (4.25), against medians of 2.56, 7.39, 8.32, and 4.85. The data indicate stability and moderate symmetry, particularly with INF being the most stable variable, exhibiting the lowest volatility (0.68), while FGTE shows the highest (2.01). INF is positively skewed (0.84), whereas FGTE, FGTD, and EXR present negative skews (-0.58, -0.40, and -0.77, respectively). All variables have kurtosis values below 3, representing platykurtic distributions with flat curves due to infrequent extreme events. The Jarque-Bera test supports the normality of all variables, with p-values exceeding 0.05 (0.105, 0.208, 0.492, and 0.101).

Table 1: Descriptive Statistics of Model Variables

Variables	INF	FGTE	FGTD	EXR
Mean	2.708858	6.972870	8.066958	4.254130
Median	2.561088	7.385257	8.317097	4.848768
Maximum	4.287716	9.648151	10.69441	5.734451
Minimum	1.686399	2.785011	4.246938	1.156881

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Std. Dev.	0.684670	2.007732	1.639338	1.400490
Skewness	0.841987	-0.57787	-0.40485	-0.76913
Kurtosis	2.886254	2.195666	2.508678	2.270094
Jarque-Bera	4.510454	3.139228	1.420271	4.590088
Probability	0.104850	0.208126	0.491578	0.100757
Sum	102.9366	264.9691	306.5444	161.6570
Sum Sq. Dev.	17.34458	149.1466	99.43490	72.57075
Observations	38	38	38	38

Source: Author's Computation using Eviews 10.

Unit Root Test Results

Table 2 presents the results of unit root tests using the Philips Peron (PP) and Augmented Dickey-Fuller (ADF) methods to assess the stationarity of variables. Both tests indicated mutual integration at order one (I[1]) of all variables, signifying non-stationarity at levels and stationarity after one differencing. The Johansen test is employed to determine the long-term co-integration relationship between dependent and independent variables.

Table 2: Unit Root Test Results

	LEVEL (I(0)		*FIRST DIFFERENCE (I(1)*		
		PP	*ADF*	*PP*	*DECISION*
VARIABLES					
LINFL	-3.32796	-3.44004	-4.2618	-6.67933	
	(0.077)	0.061	0.010	0.000	I(1)
LFGTE	0.493731	3.235253	-2.02368	-4.98843	
	0.816	0.9995	0.0431	0.000	I(1)
LFGTD	-2.62939	-2.97521	-4.72241	-4.69158	
	0.2703	0.1522	0.0028	0.003	1(1)
LEXR	-2.45274	-1.86178	-5.74324	-6.39061	
	0.1348	0.6544	0.0000	0.000	
Critical values	*LINFL*	*LFGTE*	*LFGTD*	*LEXR*	
1% level	-4.21913	-2.6534	-4.22682	-3.61559	
5% level	-3.53308	-1.95386	-3.5366	-2.94115	
10% level	-3.19831	-1.60957	-3.20032	-2.60907	

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Johansen Cointegration Test Results

The Johansen cointegration test assesses long-run equilibrium relationships among variables. Following unit root tests indicated stationarity at first difference, the Johansen test showed both Trace and Maximum Eigenvalue tests reject the null hypothesis of no cointegration at the 5% level. The Trace test identifies two cointegrating equations, while the Maximum Eigenvalue test points to one cointegrating vector, suggesting the use of a Vector Error Correction Model (VECM) for analysis as the variables are expected to return to equilibrium after short-term shocks.

Table 3: Johansen Cointegration Test Results

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value
None *	0.697136	92.11650	69.81889
At most 1 *	0.454624	49.11556	47.85613
At most 2	0.350999	27.28948	29.79707
At most 3	0.258258	11.72592	15.49471
At most 4	0.026606	0.970783	3.841466

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value
None *	0.697136	43.00094	33.87687
At most 1	0.454624	21.82608	27.58434

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At most 2	0.350999	15.56356	21.13162
At most 3	0.258258	10.75514	14.26460
At most 4	0.026606	0.970783	3.841466

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

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Post-Estimation Tests

Table 4: Serial Correlation Test

VEC Residual Serial Correlation LM Tests

Date: 07/08/25 Time: 17:55

Sample: 1986 2024

Included observations: 35

Null hypothesis: No serial correlation at lag h

Lag	LRE* stat	Df	Prob.	Rao F-stat	Df	Prob.
1	25.21948	25	0.4501	1.014400	(25, 53.5)	0.4669

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	39.4560		0.033	1.78675		0.138
2	3	25	1	6	(25, 53.5)	0

Source: Author's computation using Eviews

At Lag 1, both the Linearized Regression Equation and Rao F-statistic show no first-order serial correlation, with p-values above 0.05. At Lag 2, the LRE* indicates significance at 5% (p = 0.0331), while the Rao F-statistic is insignificant (p = 0.1380), highlighting a discrepancy in significance levels. The absence of significant serial correlation implies that the estimated VECM coefficients are efficient and the standard errors are not biased, confirming that the model captures the underlying dynamics of the data accurately without leaving systematic patterns in the error term.

Heteroskedasticity Test

Table 5: VEC Residual Heteroskedasticity Tests

VEC Residual Heteroskedasticity Tests (Levels and Squares)

Date: 07/08/25 Time: 17:56

Sample: 1986 2024

Included observations: 35

Joint test:

Chi-sq	Df	Prob.
351.0246	330	0.2040

Source: Author's computation using Eviews

The joint test of chi-sq statistics with a p-value of 0.2040, suggests that the errors are homoscedastic, which is favourable as it aligns with classical assumptions.

5. Conclusion

Inflation (INF) was identified as the most stable variable, while Government Expenditure (FGTE) displayed the highest volatility. The platykurtic distributions of these variables indicate predictable linkages, making them appropriate for long-term policy

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targeting. A significant long-run relationship exists between fiscal policy (expenditure and debt) and inflation, with a 1% increase in government expenditure resulting in a 0.85% inflation rise, and a 1% increase in government debt causing a 0.35% increase. Government expenditure has a more substantial impact on inflation than government debt. The study confirmed a long-run relationship between government spending and price levels, with inflation fluctuating alongside changes in government debt. Additionally, exchange rate fluctuations, government expenditure, and debt all influenced Nigeria's inflation rates, supporting the idea of a stable framework for analyzing inflation through the interaction of these factors.

Recommendations

The government should adopt a "Productive Expenditure Framework" fiscal policy that emphasises capital projects, particularly in infrastructure, energy, and technology, to boost economic growth and manage inflation. Policymakers need to implement measures to restrict new debt and budget deficits, maintaining a "debt-to-inflation" threshold to support development while mitigating long-term inflation risks. Furthermore, enhancing revenue through economic diversification and minimising unproductive expenditures are essential.

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