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Fiscal Policy and Economic Stability in Nigeria

Joseph Onyemaechi Ihekwereme[1*], Charles Uche Ugwuanyi[2], Charles Nnamdi Anumudu[3], Innocent Chukwuemeka Ekeagwu[4], Emmanuel Chukwuebuka Ihekwereme[5]

[1,2,3,4]Department of Economics, College of Management Sciences, Michael Okpara University of Agriculture, Umudike, PMB, 7267, Umuahia, Abia State, Nigeria.

[5]Department of Accounting, Faculty of Social and Management Sciences, Southwestern University Nigeria, KM 20 Sagamu-Benin Expressway Okun-Owa, Ogun State.

ABSTRACT: Keynesian fiscal policy framework and multiple regression analysis technique were used to appraise the impact of taxation and public expenditure on economic stability in Nigeria from 1981 to 2022. The results show that petroleum profits tax, capital expenditure and recurrent expenditure significantly influenced inflation in Nigeria, with increase in recurrent expenditure and petroleum profits tax causing inflation to rise. The study recommended that government should cut down recurrent expenditure, subsidise petroleum products and increase expenditure on public goods and services. Tax authorities should diversify tax revenue generation by fine-tuning current tax policies to capture more taxpayers into the tax net.

Corresponding Author: Joseph Onyemaechi Ihekwereme

KEYWORDS:
Economic stability, Government expenditure, Taxation, Inflation, Public goods and services

1. INTRODUCTION

Fiscal policy is the use of government spending and taxation to influence the economy. Fiscal policy objectives in the short-run focus on macroeconomic stability – for instance expanding spending or cutting taxes to stimulate an ailing economy or slashing spending or raising taxes to combat rising inflation or to help reduce external vulnerabilities. Tax is a sustainable main source of revenue for the government to fund its expenditures. Taxes are compulsory, unrequited payments to the general government or to a supranational authority. Taxes are unrequited in the sense that benefits provided by government are not proportional to their payments (OECD, 2020). Public expenditures are bills and payments governments undertake to sustain its activities and achieve its goals and objectives. Public expenditure provides public goods and services which market systems generally do not offer because of huge capital needed to execute the provision of the public goods and services, and low return on investment. Hence, government spending is needed to provide public goods and services to boost economic activities, increase output and promote economic growth (Gravelle, Hungerford & Labonte, 2009). According to Clements, Faircloth and Verhoeven (2007), public expenditure is both a tool of macroeconomic stabilization and an instrument for the development of human capital and infrastructure. Public expenditure on infrastructure, education and healthcare services improves the quality of life, and if targeted to those most in need, increases equal opportunity and social mobility, which may lead to gender equality and other social outcomes (Zouhar, Jellema, Lustig, & Trabelsi, 2021).

Inflation is a sustained rise in the general price level or a fall in the purchasing power of money (Littell, 2008). Inflation can be as a result of either increases in production costs (cost-push inflation) or total demand is rising faster than production output (demand-pull inflation). Taxation and public expenditure are therefore interacting either positively or negatively to affect economic stability of a nation. Government sometimes uses budgetary actions to either stimulate the economy or control inflation. Such countercyclical fiscal policy consists of deliberate changes in government spending and taxes designed to achieve full employment, control inflation and encourage economic growth (McConnell, Brue & Flynn, 2012).

The Nigerian Consumer Price Index (CPI), which measures inflation decreased to 15.63 percent (year-on-year) in December 2021. This was 0.13 percent points lower than the rate recorded in December 2020 (15.75) percent. This showed a decrease in the rate when compared to the corresponding period of 2020 (NBS, 2022).

Taxation is the most important source of government revenue in nearly all countries. According to an estimate from the International Centre for Tax and Development, total tax revenues account for more than 80 percent of total government revenue in about half of the countries in the world and more than 50 percent in almost every country (Ortiz-Ospina & Roser, 2016). Zouhar, Jellema, Lustig and Trabelsi (2021) confirmed that government spending has expanded globally, increasing from 29 percent of GDP in 2000 to 33

percent in 2019. According to Bird (2010), how a tax system is administered affects its yield, its incidence and its efficiency. A tax administration that is unfair and capricious may bring the tax system into disrepute and weaken the legitimacy of the government. This undermines confidence in the tax system, affects willingness to pay taxes and reduces a country's capacity to finance public expenditures.

Nigeria projected ₦8.12 trillion as aggregate revenue in 2021 financial year while its actual performance was ₦6.10 trillion. Of this, oil revenue was ₦997.8 billion; representing 49.6 percent performance of the projected figure of ₦2, 011.69 billion, while non-oil taxes revenue was ₦1.79 trillion; representing 120.4 percent performance of the projected amount of ₦1.487 trillion. Total actual aggregate public expenditure for 2021 financial year was ₦13.04 trillion; representing 89.5 percent performance as against the budget figures of ₦14.57 trillion. Actual recurrent expenditure was ₦9.15 trillion, while the actual capital expenditure of ₦3.39 trillion was less than the budget by 31.9 percent (Budget Office of the Federation, 2022). An examination of the breakdown of most budgets of developed economies reveal that a greater percentage of the overall amount of the budget is allocated to capital expenditure with lower percentage to recurrent expenditure while the funding comes mainly from Taxation. Looking at various budgets of Nigeria, there is a departure from this trend in favour of greater percentage to recurrent expenditure.

Previous researches on fiscal policy focused on its effects on economic growth and produced conflicting results. None of these studies to the best our knowledge has been carried out to ascertain the effects of tax and public expenditures on Nigeria's economic stability. For instance, Amuka, Ezeoke, and Asogwa (2016) assessed government spending pattern and macroeconomic stability in Nigeria, from 1971 to 2010 and found that government capital expenditure on economic services is the major cause of inflation in Nigeria. Ubi-Abai and Bosco (2017) examined fiscal policy and macroeconomic stability in Nigeria from 1980 to 2013 and discovered that fiscal policies increased growth in the short run but its long run effects were ineffective and that fiscal policies did not affect inflation rates. Oladipo, Olaniran and Akintunde (2018) studied oil revenues, defence expenditure and macroeconomic stability relationships in Nigeria from 1980 to 2014 and reported inverse and significant relationship between military spending, GDP per capita and macroeconomic stability. Odili, Ezeudu and Nnwadike (2019) investigated the impact of fiscal and monetary policies on the Nigerian economy from 1981 to 2018 and discovered that monetary policy rate and public expenditure impacted positively on real GDP, while tax revenue and money supply impacted negatively on real GDP. Okonkwo, Amahalu and Obi (2022) evaluated tax revenue and productivity of Nigeria from 2005 to 2020 and recorded that value added tax, petroleum profits tax, and personal income tax have negative and significant effects on GDP per Capita. The conflicting results and lack of consensus in literature may traced to methodological differences, geographical location, time differences, and the nature of the variables or data employed by the different researchers, which were generally diverse and often contradictory, suggesting the need for a further empirical investigation and consequently, this study contributed to the existing literature by providing empirical evidence on the impact of the key levers of fiscal policy (taxation and public expenditures) on economic stability in Nigeria.

2. LITERATURE REVIEW

Conceptual Framework

Economic stability is attained where there is low volatility in key performance indicators in economic growth (output), unemployment and inflation. An economy with fairly constant output growth, low unemployment rate, and low and stable inflation would be considered economically stable (Wikipedia, Economic Stability, 2021). Sustained and inclusive economic development is dependent on maintaining economic stability. In this study, economic stability is measured by inflation. Inflation can be as a result of either increases in production costs (cost-push inflation) or total demand is rising faster than production output (demand-pull inflation). Taxation and public expenditure are therefore interacting either positively or negatively to influence inflation rate and hence economic stability in Nigeria as presented in figure 1.

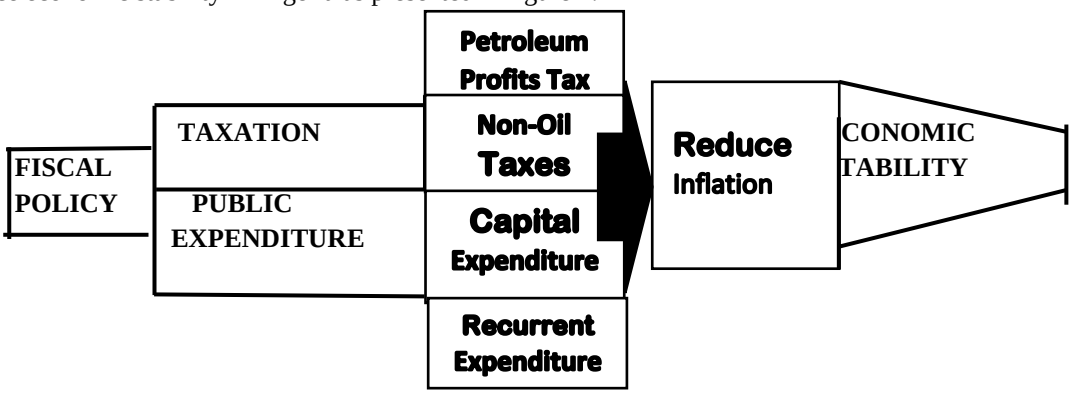

Figure 1: Conceptual Framework
Source: Authors

Theoretical Literature Review

The theory underpinning this study is the Keynesian fiscal policy theory (keynes, 1936). Keynes' theory states that government intervention and fiscal policy are necessary to stabilize the economy during times of economic downturn, as free markets are unable to recover on their own. The essence of the theory is that in times of recession, aggregate demand needs to be stimulated by government response. This, Keynes believed would reduce unemployment, increase output while controlling inflation. He argued that changes in aggregate demand influence the business cycle, and he defined aggregate demand as the totality of consumer spending, investment, government spending and net exports. The theory further says that it is better for government to spend money to assist stabilize the economy than to have a balanced budget and dis-stablised economy; concluding that increased government spending is a form of fiscal stimulus. Fiscal stimulus represents tax reduction or spending hikes aimed at expanding (shifting) aggregate demand. Besides, in times of expansion or recovery, if excessive aggregate demand is causing prices to rise, the aim of fiscal policy will be to reduce aggregate demand by adopting fiscal restraint. Fiscal restraint refers to tax increases or spending cuts aimed at reducing (shifting) aggregate demand. Hence Keynesian theory urges increased government spending or tax cuts as mechanisms for increasing (shifting) aggregate demand (Schiller, 2011).

Review of Related Empirical Literature

Previous studies on fiscal policy and economic stability in Nigeria produced ambiguous, controversial and inconclusive results. For instance, in assessing government spending pattern and macroeconomic stability in Nigeria, Amuka, Ezeoke, and Asogwa (2016) employed Vector Auto-Regressive (VAR) model using quarterly data from 1971 to 2010. The study found that government capital expenditure on economic services is the major cause of inflation in Nigeria. Impulse response function shows inflation responded sharply and positively to shock from government capital spending on economic sector and social and community services. Ubi-Abai and Bosco (2017) examined fiscal policy and macroeconomic stability in Nigeria from 1980 to 2013 using ordinary least square and Error Correction Technique. The study discovered that fiscal policies increased growth in the short run but its long run effects were ineffective. Fiscal policies did not affect inflation rates and which encouraged importation thereby creating deficits in the balance of payments.

Oladipo, Olaniran and Akintunde (2018) studied oil revenues, defence expenditure and macroeconomic stability relationships in Nigeria (1980-2014) using Autoregressive Distributed Lag (ARDL) and Error Correction Model (ECM) to determine the long and short run relationships between the variables. The results revealed that there is an inverse and significant relationship between military spending, GDP per capita and macroeconomic stability and a positive and significant relationship between oil revenues, exchange rate, gross fixed capital formation and macroeconomic stability in the long and short run. Mehraraa and Tavakoliyanb (2018) adopted fixed panel data model incorporating panel data technique and pool Ordinary Least Squares (OLS) approach to investigate "Tax Evasion, Tax Rate and Economic Stability" from 1990 to 2013. The results show a dominant negative relationship between taxes and output volatility. The estimation results also indicate that tax ratio is positively and significantly related to economic stability and tax evasion is negatively and significantly related to tax income.

Odili, Ezeudu and Nnwadike (2019) investigated the impact of fiscal and monetary policies on the Nigerian economy from 1981 to 2018. The study revealed that monetary policy rate and government expenditure impacted positively on real GDP, while government tax revenue and money supply impacted negatively on real GDP. Monetary policy instruments were not significant, while fiscal police instruments were statistically significant in the long run in influencing the Nigerian economy. Monetary and fiscal policies measures however, jointly impacted significantly on the economy of Nigeria in the long-run. In an empirical retrospect of the impacts of government expenditures on economic growth in Nigerian from 1981 to 2017, Onifade, Cevik, Erdogan, Asongu and Bekun (2020) applied Auto-Regressive Distributed Lag (ARDL) model and found the existence of relationship between public spending indicators and economic growth in Nigeria. Recurrent expenditures were found to have negative and significant impact, while public capital expenditures were not significant but have positive effects on economic growth.

Maduku and Mazorodze (2021) evaluated government expenditure and macroeconomic stability conundrum in Zimbabwe from 1981 to 2019 using Vector Error Correction Model (VECM) and Granger Causality. The study did not find a statistically significant relationship between government expenditure and macroeconomic stability as argued mostly by the Keynesians. Granger causality tests revealed no causality from government spending to macroeconomic stability, and vice versa. In a study titled "A Scrutiny into Fiscal Policy in the South African Economy: A Bayesian Approach with Hierarchical priors", Zungu, Makhoba and Greyling (2022) found that an unexpected shock in government expenditure and public debt has significant negative and persistent impact on economic growth in South Africa, while an unexpected shock in investment has a significant positive effect on economic growth. However, the study ignored Taxation component aspect of Fiscal Policy and failed to decompose Government Expenditure into Capital and Recurrent Expenditures. Okonkwo, Amahalu and Obi (2022) evaluated tax revenue and productivity of Nigeria from 2005 to 2020 using ordinary least square regression analysis, Granger Causality test, and Error Correction Model. Findings from the study revealed that value added tax, petroleum profits tax, and personal income tax have negative and significant effects on GDP per Capita.

3. METHODS

Description of Variables

Multiple regression analysis based on Autoregressive Distributed Lag (ARDL) bounds test model with relative diagnostic tests and Pairwise Granger Causality test were adopted in this study to estimate and analyse the variables. The variables used in the analysis and the sources of data are presented in table 1.

Table1 – Description, measurement, expected signs, and sources of data

Description	Measurement	*a priori* signs	Source
Inflation Rate (INF)	Inflation is a sustained rise in the general price level or a fall in the purchasing power of money (Littell, 2008).		CBN Statistical Bulletin
Petroleum Profits Tax (PPT)	Petroleum profits tax is a tax imposed on the profits of companies engaged in petroleum operations arising from petroleum Oil Mining Lease (OML), Oil Prospecting Licence (OPL) or exploration activities in Nigeria. The computation of PPT payable is in accordance with Parts III and IV of the Petroleum Profits Tax Act, Cap P13 LFN 2004 (as amended).	+	Federal Inland Revenue Service (FIRS) Tax Statistics
Non-Oil Taxes (NOT)	Non-Oil Taxes are taxes other than Petroleum Profits Tax collectible by Federal Government as indicated and listed in Taxes and Levies (Approved List for Collection) Act. These taxes include: Companies Income Tax; Withholding Tax on limited liability companies, residents of FCT, Abuja and Non-resident individuals; Value Added Tax; Tertiary Education Tax; Capital Gains Tax on limited liability companies, residents of FCT, Abuja and Non-resident individuals; Stamp Duties on limited liability companies and residents of FCT, Abuja; Personal Income Tax for members of Armed Forces of the Federation, Police Force, Residents of FCT Abuja and Staff of Federal Ministry of Foreign Affairs and Non-resident individuals.	+	Federal Inland Revenue Service (FIRS) Tax Statistics
Capital Expenditure (KEX)	Capital expenditures represent investments and development expenses that increase the infrastructural and production capacity of the economy.	+	National Bureau of Statistics (NBS)
Recurrent Expenditure (REX)	These are expenses that are incurred during a fiscal year on running the activities of the government. They include personnel costs such as salaries and wages, stationaries and consumables.	+	National Bureau of Statistics (NBS)

Source: Authors' 2025

Model Specification

This study adopted Ogar, Eyo and Arikpo (2019) model in which inflation, proxy for economic stability was modelled as function of taxation and public expenditure variables. Based on this, this study used Autoregressive Distributed Lag (ARDL) bounds test econometric technique to establish that the dependent variable (Inflation) is a function of the independent variables (Petroleum Profits Tax; Non-Oil Taxes; Capital Expenditure; and Recurrent Expenditure). This is presented in equation 1.

Inflation = f (Petroleum Profits Tax (PPT), Non-Oil Taxes (NOT), Capital Expenditure (KEX), Recurrent Expenditure (REX) = f (PPT, NOT, KEX, REX) ……(1)

Equation 1 captures the effects of taxation and public expenditure on Inflation in Nigerian. This is presented in econometric form in equation 2.

$INF = \beta_0 + \beta_1 PPT + \beta_2 NOT + \beta_3 KEX + \beta_4 REX + \mu$ ……..*(2)*

To normalise the variables, they were changed to natural logarithms and estimated using the Autoregressive Distributed Lag (ARDL) bounds test as presented in equation 3.

$$\Delta INF_t = \beta_o + \sum_{i=1}^{p} \beta_1 \Delta INF_{t-i} + \sum_{i=1}^{p} \beta_2 \Delta PPT_{t-i} + \sum_{i=0}^{p} \beta_3 \Delta NOT_{t-i} + \sum_{i=0}^{p} \beta_4 \Delta KEX_{t-i} + \sum_{i=0}^{p} \beta_5 \Delta REX_{t-i} + \alpha_1 INF_{t-1} + \alpha_2 PPT_{t-1} + \alpha_3 NOT_{t-1} + \alpha_4 KEX_{t-1} + \alpha_5 REX_{t-1} + \mu_t \quad \text{.....(3)}$$

Where β_0 = Intercept; β_1 *to* β_5 = short-run elasticity (coefficients of the first-differenced explanatory variables); α_1 to α_5 = Parameter estimate for the explanatory variables; long-run elasticity (coefficients of the explanatory variables); ✶= speed of adjustment; ECM_{t-i} = error correction term lagged for one period; Δ = first difference operator; p = lag length.

The error correction mechanism equation is presented in equation 4.

$$\Delta INF_t = \beta_o + \sum_{i=1}^{p} \beta_1 \Delta INF_{t-i} + \sum_{i=1}^{p} \beta_2 \Delta PPT_{t-i} + \sum_{i=0}^{p} \beta_3 \Delta NOT_{t-i} + \sum_{i=0}^{p} \beta_4 \Delta KEX_{t-i} + \sum_{i=0}^{p} \beta_5 \Delta REX_{t-i} + \bigstar ECM_{t-1} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

The study also carried out Granger causality test (GCT) to determine the existence of causal relationship and provide the direction of impact. The concept of causality is that a cause cannot come after the effect. According to DeLurgio (1998), Granger Causality test is based on the fact that the future cannot affect the past. To evaluate the causal relationship of two variables, if the probability value of a variable Y significantly contributes to forecasting the value of another variable X, then Y has a Granger causal relationship with X and vice versa

4. RESULTS AND DISCUSSION

Table 2: Descriptive Statistic

	INF	PPT	NOT	KEX	REX
Mean	18.92366	72599.9	69589.40	578.1507	1706.091
Median	13.00000	4811.00	4126.700	321.3800	579.3000
Maximum	72.80000	683484.	523970.1	3603.680	8121.640
Minimum	5.400000	1157.81	565.7000	4.100000	4.750000
Std. Dev.	15.90921	169114.	142365.6	728.9999	2181.699
Skewness	1.815869	2.75702	2.333700	2.170986	1.281426
Kurtosis	5.572258	9.25436	7.279392	8.793316	3.729771
Jarq-Bera	33.83530	118.766	68.50045	89.54269	12.13049
Probability	0.000000	0.00000	0.000000	0.000000	0.002322
Obs.	42	42	42	42	42

Source: Authors' 2025

The descriptive frequencies statistics in Table 2 shows that the mean and the median value differed largely. Similarly, the standard deviation which is a measure of risk or dispersion from the mean reveals that the series were highly dispersed from their respective mean values. The skewness values were greater than the average threshold (0), this is an indication that the series are highly skewed positively and highly abnormal in distribution. Similarly, the Kurtosis values of the series were greater than the standard (normal) value of 3. This means that the distribution of the series were leptokurtic (peaked-curve) relative to the normal value. From the Jarque-Bera test, a test for normality, the ρ-values are less than the significant level of 5%, thus, the null hypothesis that the series are normally distributed was rejected. The results of the descriptive analysis therefore confirmed the abnormality of the series in the distribution. Consequently, the data was transformed to address the issue of abnormality of the data series. Their natural logarithm were taken to linearize the distribution and then to limit the likelihood of spurious regression. Normality is critical in many statistical methods and when this assumption is violated, interpretation and inference may not be reliable or valid (Park, 2008; Stockemer, 2019).

Unit Root Test

Table 3: Augmented Dickey-Fuller (ADF) Unit Root Test Results of Stationarity

Variable	Stationarity (Levels)	Stationarity (1st Difference)	Status
LNINF	-4.634516**	-	I(0)
LNPPT	-2.120487	-6.967996**	I(1)
LNNOT	-1.961708	-6.225682**	I(1)
LNKEX	-1.630319	-6.734122**	I(1)
LNREX	-0.115439	-8.399054**	I(1)

Source: Authors' 2025

Note: p-values of coefficients: ** p<0.05

The ADF statistics were generated with drift and trend at the maximum lag length of 9 (nine). From the result in table 3, the ADF indicated that INF integrated at level i.e. order zero or 1(0) or ($\Delta = 0$), while the explanatory variables were integrated at first difference i.e. order one or 1(1). Due to the existence of mixed integration, the Autoregressive Distributed Lag (ARDL) bounds test approach to Co-integration was applied (Johansen & Juselius, 1990; Pesaran, Smith, & Shin, 2001).

ARDL Bounds Test

Co-integration test was conducted and it measured the existence or otherwise of long run relationship in the model.

Table 4: ARDL Bounds Test Result

LNINF = *f*(LNPPT, LNNOT, LNKEX, LNREX)				
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	11.19787	5%	2.86	4.01
K	4	1%	3.74	5.06

Source: Authors' 2025

The result of the bounds test showed that the F-statistic value was 11.19787. It was noted that the reported F-statistic exceeded the critical values of the bounds at 5% significance level, implying a long-run equilibrium relationship between different orders of the dependent and independent variables. The Co-integrating coefficients are presented in Table 5.

Table 5: Long-run coefficients of the Model

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
LNPPT	1.964035	0.681218	2.883123	0.0452**
LNNOT	-1.311641	0.763437	-1.718074	0.1095
LNKEX	-0.242080	0.077288	-3.132186	0.0064**
LNREX	0.394479	0.093968	4.198037	0.0012**

Source: Authors' 2025

Note: *** denotes significant at 5% level*

The positive coefficient of LNPPT (1.964035) with a p-value of (0.0452) and LNREX (0.394479) with a p-value of (0.0012), were statistically significant at 5% level, which that imply that an increase in PPT and REX led to increase in INF, which is an indication that rising inflation rate is associated with high PPT and KEX and could lead to economic instability in the long-run. The coefficients of LNNOT (-1.311641) with a p-value of (0.1095) and LNKEX (-0.242080) with a p-value of (0.0064), imply that an increase in Non-Oil tax and capital expenditures caused a decrease in inflation rate. This is an indication that increase in the rate of NOT and KEX is generally favorable to Nigeria as it decreases the rate of inflation in the long-run. LNNOT was however, not significant, but KEX (0.0064), was found to be significant in influencing inflation rate at 5% level.

Error Correction Model (ECM)

The study employed the ECM to ascertain the speed of adjustment back to equilibrium position once the equation is shocked. The results are presented in Table 6.

Table 6: Error Correction Model (ECM)

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**	
D(LNINF(-1))	-0.144391	0.089552	-1.612367	0.1309	
D(LNINF(-2))	-0.500518	0.077800	-6.433436	0.0000	***
D(LNPPT)	-0.103744	0.107652	-0.963699	0.3528	
D(LNPPT(-1))	-0.863820	0.123419	-6.999082	0.0000	***
D(LNPPT(-2))	-0.286013	0.132683	-2.155601	0.0504	
D(LNNOT)	0.428218	0.116078	3.689068	0.0027	***
D(LNNOT(-1))	0.743731	0.117822	6.312339	0.0000	***
D(LNNOT(-2))	0.251995	0.116320	2.166391	0.0495	***
D(LNKEX)	0.178879	0.147594	1.211974	0.2471	
D(LNKEX(-1))	0.326726	0.190921	1.711320	0.1108	
D(LNKEX(-2))	0.565793	0.178577	3.168342	0.0074	***
D(LNREX)	0.801900	0.215992	3.712633	0.0026	***
D(LNREX(-1))	0.926701	0.197543	4.691126	0.0004	**
D(LNREX(-2))	0.063586	0.195847	0.324671	0.7506	
ECM(-1)*	-0.447573	0.048870	-9.158353	0.0000	***
R-squared	0.932631				
Adjusted R-squared	0.865263				
F-statistic	26.36230				

Prob(F-statistic)	0.000000
Durbin-Watson stat	2.105857

Source: *Authors' 2025*

Note: ***, ** denotes significant at 1%, and 5% level respectively.

The error correction term (ECM) is both negative and statistically significant, showing that the established long-run relationship can be attained. The speed of adjustment shows that about 44.7% of the short-run dynamics in LNINF is corrected every period (a year). The estimated p-value of D(LNINF(-1)) reveals that, previous year innovations in LNINF have statistically insignificant negative relationship with its current level (at 5% significance level). The implication of the above finding is that government do not examine the yearly rate of inflation to make decision but the D(LNINF(-2)) shows that it takes a longer period of at least two years for previous values of inflation to influence its current value. The short-run coefficient of LNPPT indicates that dynamics of Petroleum Profits Tax caused a decrease in Inflation rate in the short-run, while, LNNOT, LNKEX and LNREX were positive and significant, and indicating that increase in Non-Oil Taxes, Capital Expenditure and Recurrent Expenditure spurred inflationary pressure in the short-run. The result corroborates previous findings of Amuka, Ezeoke & Asogwa (2016); Ubi-Abai & Bosco (2017); Maduka & Mazorode (2021) who found that government expenditures do cause increased inflation.

Diagnostic Tests

To ascertain the robustness of the outcomes of the results, it was important to ensure that the stability and the correct functional form of the model were specified to avoidance severe serial correlation and heteroscedasticity (Godfrey, 1996; Jarque & Bera, 1987). The test statistic for the various tests must be statistically insignificant to ensure the absence of the aforementioned econometric problems.

Table 7: Diagnostic Tests (LNINF)

Test	**Test Statistic**	Prob.
Serial Correlation Test:	F-statistic: 0.093223	0.9117
Heteroscedasticity Test:	F-statistic: 0.338373	0.9887
Jarque-Bera Test:	4.228013	1.20753

Source: Authors' 2025

The Diagnostic test results of Serial Correlation, Heteroscedasticity and Jarque-Bera confirmed the absence of any serious serial correlation since the F-Statistic was statistically insignificant.

Figure 2 showed that the cumulative number of recursive residues (CUSUM) and the cumulative number of recursive residues of squares (CUSUMSQ) for the ARDL model were within critical limits for the 5 per cent significance level, indicating that the ARDL model coefficients in each specification were stable.

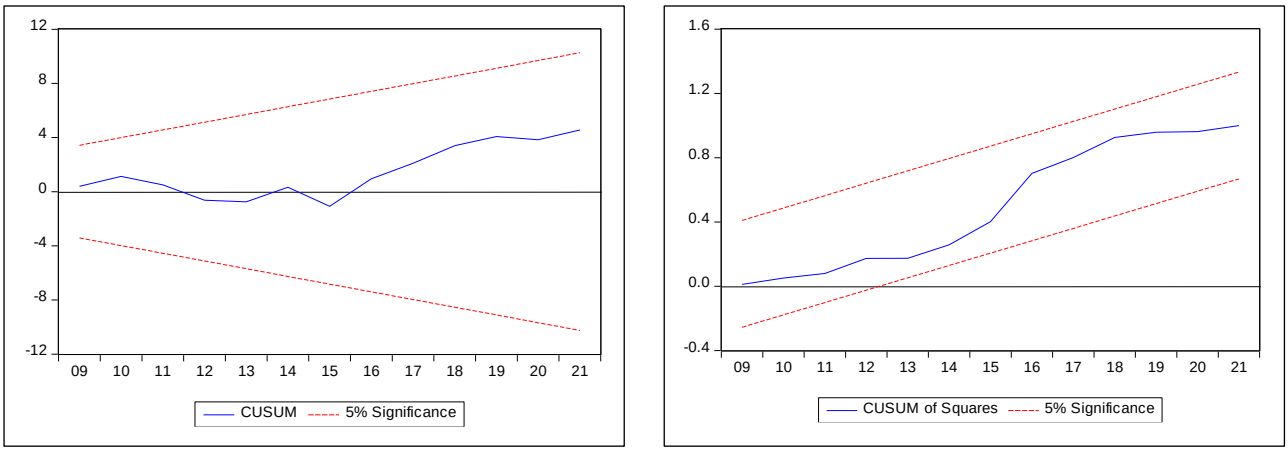

Figure 2: CUSUM and CUSUMQ

Table 8: Pairwise Granger Causality Tests

Null Hypothesis:	**Obs**	**F-Statistic**	**Prob.**
LNPPT does not Granger Cause LNINF	39	0.80162	0.4569
LNINF does not Granger Cause LNPPT		0.17220	0.8425

LNNOT does not Granger Cause LNINF	39	0.36671	0.6957
LNINF does not Granger Cause LNNOT		0.40705	0.6688
LNKEX does not Granger Cause LNINF	39	1.63911	0.2091
LNINF does not Granger Cause LNKEX		4.42004	0.0197
LNREX does not Granger Cause LNINF	39	1.12007	0.3380
LNINF does not Granger Cause LNREX		2.41650	0.1044

Source: *Authors' 2025*

Granger causality results show that there is no causality from LNINF to PPT, NOT, and REX and vice-visa. However, a unidirectional causality runs from LNINF to LNKEX with a probability value of 0.0197, which is positive and significant. This implies that investment in capital expenditure can reduce the level of inflation in Nigeria. This finding is in-line with classical theory where it is argued that low production the causes of economic instability leading to the shortage of capital. Also, falling prices would lead to producers deciding to produce lower amounts of production because they know they would receive lower prices for their products. Thus, they let their money sit idle in banks and workers became unemployed. These causes suggest that high productive levels are one of the important policies for solving the economic problems.

5. CONCLUSION AND RECOMMENDATIONS

The key findings of this paper are that Non-Oil Taxes and Capital Expenditure exerted negative effects on Inflation rate in Nigeria, while Non-Oil Tax was not significant in influencing inflation, Recurrent Expenditure and Petroleum Profits Tax had positive and significant effects on inflation in Nigeria. Granger causality test revealed that there is no causality from inflation to Petroleum Profits Tax, Non-Oil Taxes and Recurrent Expenditures and vice-visa, but a unidirectional causality runs from inflation to capital expenditure. The researchers therefore conclude that Petroleum Profits Tax, Capital Expenditures and Recurrent Expenditures are the significant variables affecting the rate of Inflation in Nigeria, with increase in recurrent expenditure and Petroleum Profits Tax causing inflation to rise. This influences the cost of capital projects thereby hindering infrastructural development, provision of public goods and services and gross fixed capital formation in Nigeria. On the bases of the findings of this study, it is recommended that the government should diversify her revenue base, invest in human capital development, ensure transparency and accountability, cut down her expenditure on recurrent expenditures, subsidise petroleum products and increase capital expenditure items. We also recommend that tax authorities should strive to sustain an unflinching commitment towards improved Non-oil taxes collection by fine-tuning the current tax policies and procurement due processes in the light of unfolding and evolving business environment in Nigeria, so as to capture more taxpayers into the tax net, harness new tax areas, ensure proper execution of projects and its maintenance which would in turn generate employment, increase output, stabilise prices and enhance economic stability in Nigeria.

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