Fiscal Policy and Inflation in Nigeria

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ABSTRACT

Aims: This study aims to analyze how Nigerian government activities impact inflation, considering the inadequacy of monetary policy. It focuses on recurrent and capital expenditures in various sectors and their influence on inflation, as well as public debt and tax revenue's role in inflation dynamics.
Study design: The study employed secondary data.
Place and Duration of Study: Data sources include the National Bureau of Statistics (NBS), Central Bank of Nigeria (CBN) statistical bulletin, Debt Management Office (DMO), and World Development Indicators (WDI) spanning from 1986 to 2021
Methodology: The study employs econometric techniques, including unit root tests and Autoregressive Distributive Lag (ARDL) analysis, with Inflation Rate (IFL) as the dependent variable. Independent variables representing fiscal policy include capital expenditure on transfers (CTRA), recurrent expenditure on administration (RADM), recurrent spending on social and community services (RSCS), recurrent expenditure on economic services (RECE), recurrent expenditure on transfers (RTRA), capital expenditure on administration (CADM), capital spending on social and community services (CSCS), capital expenditure on economic services (CECE), government direct and indirect taxes (TAX), government capital expenditure (GCE), government recurrent expenditure (GRE), and external debts (PUD).
Results: Key findings reveal that in the long run, only RADM, RTRA, CADM, CECE, CSCS, GRE, GCE, PUD, and TAX had statistically significant relationships with inflation (IFL). RADM, CECE, CSCS, GCE, PUD, and TAX exhibited negative relationships with IFL, while RTRA, CADM, GRE showed positive relationships. In the short run, RSCS, RTRA, CADM, CECE, CSCS, CTRA, GRE, GCE, and TAX displayed statistical significance. RSCS, RTRA, CADM, and GRE positively correlated with IFL, while CECE, CSCS, CTRA, GCE, and TAX had negative associations.
Conclusion: The study concludes that Nigeria's fiscal policy should prioritize increased government capital spending in economic and social sectors to manage inflation effectively. Additionally, implementing fiscal restraint through higher taxation can help mitigate inflationary pressures.

Keywords: Fiscal Policy Impact, Inflation Dynamics, Econometric Analysis, Public Debt Influence, Tax Revenue Effects, Monetary Policy Inadequacy, Nigeria Inflation Management

1. INTRODUCTION

The primary concern for most economies is the current surge in inflation, which, in many countries, is the highest since the 1980s. High inflation is considered detrimental to an economy's well-being because of its effects, including a reduction in purchasing power. However, it's worth noting that high inflation, as experienced during stagflationary periods like the 1970s 'decade of stagflation,' can also have its benefits. This is evidenced in World Bank data [1] that shows how the US economy has benefited from high inflation, relying on the Philips Curve.

Recently, the world has grappled with persistent high inflation, resulting in an increase in food and energy prices. This recent trend is attributed to the COVID-19 pandemic and the ongoing Russian-Ukrainian conflict, causing 'imported inflation' in many countries [2,3].

To combat this rising inflation trend, central banks have taken steps to increase interest rates in order to curb demand. In January 2023, the United States raised its rate from 4.5% to 4.75%, while the UK increased its rates from 3.5% to 4.0% between December 2022 and January 2023. France saw a slight rise from 2.62% to 2.69%, South Africa increased from 7.0% to 7.25%, and Nigeria made a substantial jump from 16.50% to 17.50% [4]. Brazil and Kenya, on the other hand, maintained their rates at 13.75% and 8.75%, respectively.

Among the world economies considered, Nigeria had the highest prevailing interest rate during this period. While some of these economies experienced a decrease in their inflation rates during this period, others saw an increase. For example, between December 2022 and January 2023, the inflation rate in the United States decreased from 7.1% to 6.5%, in the United Kingdom from 10.5% to 10.1%, and in South Africa from 7.2% to 6.9%. Conversely, inflation rates in France, Kenya, and Nigeria increased from 5.85% to 6.0%, 7.66% to 7.95%, and 21.34% to 21.82%, respectively [4]. In summary, not only did Nigeria have the highest interest rate during the reviewed period among the countries examined, but it also had the highest inflation rate."

In Nigeria, in addition to increasing interest rate, the Central Bank of Nigeria (CBN) has implemented other policies to reduce rising inflation. For instance, in the first quarter of 2023, the CBN implemented a policy that limits cash withdrawals from individual accounts and corporate accounts to N500,00.00 and N5,000,000.00 per week, respectively. The CBN also redesigned the N200, N500, and N1,000 notes, in an effort to reduce the quantity of cash that is unlawfully kept outside banks' vaults [5]. These policies, among other monetary policies, have been seen to be costly and harmful to steady economic expansion. This highlights the importance of fiscal policy as part of a policy mix to drive the economy.

Fiscal policy is a tool used by governments to control how money is spent and allocated. The aim is usually to promote sustainable growth and domestic and international economic stability [6]. Fiscal policy could drive an economy to a stronger foundation through investments in infrastructure and human development projects, promotion of equality, reduction in poverty, and offer of fundamental social programmes. While monetary policy is capable of controlling inflation, fiscal policy can also aid the economy in the short and long run. The ultimate instruments of fiscal policy are taxes and government expenditure. These tools can be used to control production and consumption through decisions to either increase aggregate demand, by increasing expenditure or cutting taxes. These decisions increase household income and encourage consumption spending, and could ultimately cause high inflation. Alternatively, government can reduce deficit, and this would reduce overall demand and inflation. In this later scenario, the Central Bank would not need to implement policies that would reduce inflation.

Providing fiscal stimulus during high inflation could be detrimental to the economy and may compel the Central Bank to use monetary policy tools to curb inflation [7]. Fiscal stimulus has been seen to be necessary when the economy is in depression or in financial crisis. This was evident during the Great Depression, the Global Financial Crisis that led to the 'Great Recession' of 2007-2009, and most recently, the COVID-19 Pandemic that brought the global economy to a stall [8,9]. The use of fiscal dominance by the fiscal authority can also lead to rising inflation. This is because the fiscal goal of economic growth reduces the Central Bank's price and monetary stabilization efforts. Policy mix is therefore important in tackling inflation, although most Central Banks are tightening their guidelines, in reaction to

the ongoing increase in global inflation. Fiscal restraint, as opposed to relying solely on monetary policy responses, will aid in lowering rising inflation [10,11].

In Nigeria, the country's high inflation rate has been attributed to poor economic policies, although some experts argue that the Russian-Ukraine conflict and the COVID-19 pandemic have also played significant roles. To address the economic challenges brought about by the pandemic, the Nigerian government implemented various measures, including economic stimulus packages aimed at protecting businesses and vulnerable individuals. Building on the framework proposed by [8], the government utilized automatic stabilizers and fiscal stimulus strategies to bolster the economy during times of crisis. These measures encompassed adjustments to the 2020 budget, the Central Bank of Nigeria's stimulus package, reductions in the gasoline pump price, tax reliefs provided by the Federal Inland Revenue Service (FIRS), and the introduction of the 'Emergency Stimulus Bill' by the National Assembly [12].

Prior to the COVID-19 pandemic, the Nigerian Government had already launched several initiatives to enhance the well-being of its citizens. These initiatives included the Subsidy Reinvestment Programme (SURE-P), which was introduced by the President Goodluck Ebele administration, the N-Power Programme, Conditional Cash Transfers, and MoniMarket (which continues to operate). These programs fell under the umbrella of the Social Investment Programme (SIP) introduced during President Muhammadu Buhari's administration, which is still ongoing. Furthermore, the Nigerian government had increased the minimum wage from N18,000 to N30,000 per month. It also made subsidy payments for petroleum products and energy consumption until recently when the Tinubu-led government decided to abolish these subsidies. However, the rise in budget deficits compelled the Nigerian government to significantly increase its public debt, which surged from approximately N12.1 trillion in 2015 to about N42.8 trillion in 2022[1] [13,14]. This growing debt burden has raised concerns due to the high debt-service obligations and the potential for increasing inflation. Despite these challenges, all these policies and programs were designed with the aim of improving the overall well-being of Nigerian citizens.

Given the ineffectiveness of monetary policy measures in addressing rising inflation in Nigeria, this study aims to investigate the impact of Nigerian government activities on inflation. Specifically, the study will: (i) Investigate the impact of recurrent expenditure on administration, social and community services, economic services, and transfers on inflation. (ii) Examine the impact of government capital expenditure on administration, social and community services, economic services, and transfers on inflation. (iii) Evaluate the impact of government total recurrent and capital expenditure, public debt, and tax revenue on inflation.

Previous studies on fiscal policy and inflation adopted models that treat fiscal policy’s tools in aggregated forms [15,16,17,18]. For instance, government expenditure (both recurrent and capital expenditures) were employed in aggregated form and used as a tool of fiscal policy to assess the impact on inflation. In this study, the disaggregated effects of fiscal policy variables are incorporated in Autoregressive Distributed Lag (ARDL) Model in the analysis.

As the previous monetary and fiscal policies of the Central Bank of Nigeria (CBN) and the Nigerian government have failed to effectively reduce inflation, this study proposes alternative policies to achieve greater economic stability. The study identifies tools that can directly and indirectly contribute to the objective of reducing inflation. Additionally, it addresses inflationary concerns related to fiscal stimulus, examining how government spending can be increased without causing inflationary pressures. The study also dispels the

misconception of tax-price increases by exploring how tax revenue can be utilized without leading to inflationary effects.

Fiscal policy describes changes in government spending and revenue behaviour in a bid to influence the economy. By adjusting its spending level and tax revenue, the government can affect economic outcomes, by either increasing or decreasing economic activity. Taxes and government expenditure are the ultimate instrument of fiscal policy, though in some jurisdictions, grants and aid constitute significant complementary tools. Fiscal policy is composed of a suit of revenue and expenditure policies/actions. Public Revenue can be categorized into tax and non-tax. The former can be classified as direct tax, indirect tax. Public expenditure, on the other hand, can be categorized into recurrent and capital expenditure. Other tools of fiscal policy include public borrowings and transfers. Overall, fiscal policy can be deployed to correct economic imbalances in periods of recession and depression. Fiscal policy can also be useful in reducing rising inflation and external shocks [8].

Three major types of fiscal policy have been identified in the literature, namely: expansionary fiscal policy, contractionary fiscal policy and a balanced budget. Expansionary fiscal policy is necessary when the economy is operating below its maximum productive capacity. It is utilised to promote recovery. Contractionary fiscal policy is necessary when the economy is experiencing rising inflation. Here, taxes are increased, while government spending is reduced, in order to restrain overall demand, investments, consumption, and output. A balance budget occurs when tax receipts and spending are equal. Once the economy is on full employment and the government wants to maintain both internal and foreign economic stability, a balanced budget is necessary. The model in equation (1) below shows how governments can directly and indirectly influence the use of resources in the economy.

$$Y = C + I + G + NX \qquad 1$$

Where: *Y* is the economic growth, *C* is private consumption, *I* is private investment, *G* is government spending, and *NX* is net export.

Fiscal stimulus may be used to increase government expenditure, decrease tax income, or a mix of the two, in order to boost the economy. However, it can also result in higher interest rates, increased trade deficits, and rising rates of inflation. These scenarios can counteract the stimulative benefits of fiscal stimulus. However, the economy may benefit from this during a downturn. Continuous fiscal stimulus may impact the economy negatively, through increased budget deficit, reduced private investment, and increased public debt servicing [8].

One of the most important indicators of inflation or deflation is the consumer Price Index (CPI). Additionally, CPI can also be useful in determining the purchasing power of a country's currency. The CPI is the sum of price changes for various goods and services. Measuring the overall effect of these price adjustments is what inflation does. Therefore, inflation has been defined differently as a situation in which prices are rising and the value of money is decreasing, or as a situation where too much money is being spent in comparison to the actual amount of business being conducted [19,20]. Inflation can also be measured using Personal Consumption Expenditure Price Index (PCE) - which uses data reported by businesses selling goods and services [21].

Generally, inflation can be calculated using the formula below.

$$Inflation = \frac{New_P - Old_P}{Old_P} * 100 \qquad 2$$

Inflation can be caused by an increase in money supply. Both monetary and fiscal authorities increase the money supply in different ways. These, among others, could be through the printing of new notes, distribution of money in the economy, and currency devaluation. These actions induce inflation through mechanisms of demand-pull inflation, cost-push inflation, and built-in inflation. Demand-pull inflation is caused by an increase in money supply – which usually induce a rise in demand for product and services. Cost-push inflation occurs as a result of increase in cost of product input, arising from an increase in money supply. Built-in inflation is caused by adaptive expectations due to an increase in current inflation rate.

John Maynard Keynes in his definition of inflation ignored the increase in money supply as a factor responsible for inflation. Rather, he submitted that inflation is being caused by over-employment, over-production, and price increases without over-production. Keynes further agreed that prices increase occasioned by employment and output is healthy for the economy – as it puts the economy into the track for full-employment. Thus, Keynes, defined inflation as "a rise in the price level above full employment" [22].

Several theories have been proposed by different schools of thoughts regarding inflation. The Quantity Theory of Inflation holds that the amount of money, which is influenced by variables like the regularity of salary payments, the makeup of the economy, and savings and spending habits, determine the price levels. Although it was formerly popular, this idea, which implies that production potential is totally utilized, went out of favour throughout World Wars I and II. Milton Friedman and other economists contended that long-term stability in the velocity of circulation is unswerving, and proposed that short-term changes in the money supply are accompanied by variations in overall revenue. They still believe that the comparative steadiness of the velocity of distribution results from the manner the money supply adjusts towards the demand; if supply is constrained in the context of increasing demand, velocity will rise or alternative sources of loan will be tapped.

According to Keynes, consumers typically expend a fixed percentage of every pay increases received, which results in a discrepancy among earnings and consumption expenditure. Spending on non-consumption products and services should be set at a level that will close the gap. Although inert cash is closely associated with the velocity of circulation, private sector investment is subject to the interest rate. This method offers a framework in managing the economic activity's level by altering outlays and revenues or affecting private investment. Uncertainty over the basic quantitative relationships and time gaps in their operation prove problematic. However, it has resulted in more effective control over transient fluctuations in actual wages and employment. Keynesian theory contends that attempts to purchase greater products and services than are available lead to inflation. However, the theory is unable to explain the reality of persistent inflation in the decades following World War II, under circumstances that do not point to the presence of an inflationary gap.

Cost-push theory postulates that salary earners and profit recipients desire earnings that exceed the combined worth of their output at full employment. If money supply is constant, this process would result in rising monetary restrictions, making it challenging to fund salary increases and product purchases. In reality, money supply adjusts to meet demand, however, in part, since monetary authorities do not want to witness the instability of capital markets. This, invariably, would result from monetary tightening, and subsequently, lead to significant increases in interest rates.

The structural interpretation of wage inflation is predicated on the perception that there is strong opposition to decreases in money wages that changes must be achieved by raising all pay in absolute terms (with the exception of those of the group of employees with the weakest market position). Another variation focuses on the discrepancy between exports and imports in developing nations, where imports frequently grow more quickly than conventional exporting industries can absorb them. This may result in a persistent downward strain on the country's currency's value in foreign exchange markets and an upward pressure on domestic pricing. Demand-pull inflation may also result from socio-political demands to create jobs for the rural populations that migrate to urban centres.

Some studies have been carried out in the area of fiscal policy and inflation. Lindh [23], the expansionary fiscal policy implemented during the COVID-19 epidemic had a favourable impact on Swedish inflation however a negative influence on the annual rate of inflation. Employing the ADF unit root test, the bounds test for cointegration, and the ECM to examine how government actions affect inflation in Nigeria. The findings of [24] indicate that the crucial limit has not yet been achieved because government operations do not drive inflation over the research period. Asandului [25] opines that fiscal policy has an unbalanced impact on inflation and output in the economy in post-communist European countries, with long-term negative consequences and short-term favourable effects. Their key conclusion is that the sampled EU nations experience inflationary expansion due to combined influence of fiscal policy. In their study of the long-term relationships between disaggregated public spending and inflation rates in a few African nations, [26] discovered that a 1% change in infrastructure (capital) and defense spending results in a 0.56% and 0.27% increase in inflation rate, respectively.

In Nigeria, [27] looked at the connection between fiscal policy and inflation rate, using time series data from 1970 to 2013. The findings revealed a statistically negligible positive association between government spending, government tax receipts, and inflation, but a significant-positive relationship between government debt stock and inflation. The authors conclude that in order to diversify the country's economic basis, government should reduce borrowing, enhance tax administration, and implement workable fiscal and monetary policy measures. Otto and Ukpere [28] found that fiscal policy has insignificant impact on inflation, and therefore suggested increased government expenditure. Anichebe [29] investigated the effects of tax policy on inflation in Nigeria, using aggregate time series data. The study found that tax policy has long run relationship with inflation in Nigeria; personal income tax rate has negative impact on inflation in the long run, while company income tax rate and consumption and property taxes have significant positive relationship with inflation in the long run. Given these findings, [28] suggested that government should factor in tax policy when formulating policies that are meant to control inflation. Tulip [30], in his study opined that although macroeconomic shocks are more volatile now, fiscal activism can take the place of a high inflation target. Tulip's [30] showed that a rise in inflation target is not necessary, provided fiscal policy continues to act in course with the current trend.

Using data from India, Vietnam and Indonesia, [31] investigated the impact of government spending on inflation. Findings from the study revealed that, over a long term, public spending in all the three countries has a statistically significant impact on inflation. Results also showed that in India, there is a short-term impact on inflation that is favourable, in Indonesia, government expenditure has a negative short-term influence on inflation, while in Vietnam, the short-term impact is the opposite, running from public spending to inflation. From the findings, [31] submitted that there is need for prudency in increasing public spending in Asia. In their 2012 study, [32] discovered that, over the long term, there is a co - integrating relationship between public spending and taxation with respect to output. Tax

hikes result in higher inflation whereas rises in government expenditure has an opposite effect. This analysis also suggests that Indonesia's government has no fiscal discretion.

Provide a factual background, clearly defined problem, proposed solution, a brief literature survey and the scope and justification of the work done.]

2. METHODOLOGY

This study used secondary data as its basis. The relevant data used were sourced from the CBN's statistical bulletin, the Nigeria Bureau of Statistical (NBS) Bulletins, the Debt Management Office, and Annual Reports from 1986–2021. The econometric procedure that is adopted to examine the effects that fiscal policy has on inflation in Nigeria is the Autoregressive Distributive Lag (ARDL). Three multiple regression models are adopted to capture the impact of fiscal policy on inflation in Nigeria.

The generalized models developed for this study is based on a modified model developed by [27]. Models 1 and 2 show the disaggregated model for government recurrent and capital expenditures, respectively, as shown in equations 3 and 4, while equation 5 captures the aggregate government expenditures (gre and gce), government public debt (pud), and tax revenue (tax).

Model 1:

$$ifl = f(radm, rscs, recs, rtra) \quad 3$$

Model 2:

$$ifl = f(cadm, \csc s, cecs, ctra) \quad 4$$

Model 3:

$$ifl = f(gre, gce, pud, tax) \quad 5$$

The econometrics versions of equation (3), (4), and (5) are presented in equation (6), (7), and (8) as shown below:

$$ifl = \alpha_0 + \alpha_1 \log(radm) + \alpha_2 \log(rscs) + \alpha_3 \log(recs) + \alpha_4 \log(rtra) + \mu_i \quad 6$$

$$ifl = \beta_0 + \beta_1 \log(cadm) + \beta_2 \log(\csc s) + \beta_3 \log(cecs) + \beta_4 \log(ctra) + \psi_i \quad 7$$

$$ifl = \delta_0 + \delta_1 \log(gre) + \delta_2 \log(gce) + \delta_3 \log(pud) + \delta_4 \log(tax) + \upsilon_i \quad 8$$

Where: *ifl* is the inflation rate; *ctra* is capital expenditure on transfer; *radm* is recurrent expenditure on administration; *rscs* is recurrent spending on social and community services; *rece* is recurrent expenditure on economic services; *rtra* is recurrent expenditure on transfers; *cadm* is capital expenditure on administration; *cscs* is capital spending on social and community services; *cece* is capital expenditure on economic services; tax is a measure of government direct and indirect taxes; *gce* is government capital expenditure; *gre* is government recurrent expenditure, *pud* is public debt as a component of external debts; α_0,

β_0, δ_0 are the constant terms; $\alpha_{1-4}, \beta_{1-4}, \delta_{1-4}$ are coefficients of the explanatory variables; while μ_i, ψ_i, ν_i are the stochastic or error terms in the model.

3. RESULTS AND DISCUSSION

The unit root results in Table 1 above indicate the stationarity test for Models 1–3. For model 1, which captures the government recurrent expenditure–inflation nexus, the stationarity result shows that only administration expenditure (radm) is stationary at level [i.e. I(0)], while others are stationary at the first difference [i.e. I(1)]. The result from model 2, which presents the government capital expenditure–inflation nexus, shows that all the variables are stationary at the first difference [i.e., I(1)]. Table 1 further shows that all the variables were stationary at the first difference when a stationarity test was conducted on the fiscal policy instruments as shown in Model 3 of this study.

TABLE 1: Augmented Dickey-Fuller (ADF) Unit Root Test and Order of Integration

Variables	Augmented Dickey-Fuller Test Statistic	5% Mackinnon Critical Level	Order of Co-integration	
$ifl = \alpha_0 + \alpha_1 \log(radm) + \alpha_2 \log(rscs) + \alpha_3 \log(recs) + \alpha_4 \log(rtra) + \mu_i$				4
ifl	-5.596613	-2.951125	I(1)	
log(radm)	-4.176672	-2.963972	I(0)	
log(recs)	-7.251287	-2.951125	I(1)	
log(rscs)	-7.983011	-2.951125	I(1)	
log(rtra)	-8.360761	-2.951125	I(1)	
$ifl = \beta_0 + \beta_1 \log(cadm) + \beta_2 \log(\csc s) + \beta_3 \log(cecs) + \beta_4 \log(ctra) + \psi_i$				5
ifl	-5.596613	-2.951125	I(1)	
log(cadm)	-9.332737	-2.951125	I(1)	
log(cecs)	-7.251287	-2.951125	I(1)	
log(cscs)	-7.983011	-2.951125	I(1)	
log(ctra)	-8.360761	-2.951125	I(1)	
$ifl = \delta_0 + \delta_1 \log(gre) + \delta_2 \log(gce) + \delta_3 \log(pud) + \delta_4 \log(tax) + \upsilon_i$				6
ifl	-5.596613	-2.951125	I(1)	
log(gre)	-7.251287	-2.951125	I(1)	
log(gce)	-8.308724	-2.951125	I(1)	
log(pud)	-4.301503	-2.951125	I(1)	
log(tax)	-6.467740	-2.954021	I(1)	

We observe that the F-statistic of 11.86535 for Model 1, 16.48066 for Model 2, and 5.420931 for Model 3, are higher than the 5% (4.09) critical values at both the lower and upper bounds. Thus, the F-statistic is significant. The significance of the F-statistic signifies that there exist a long-run relationship in the models. Therefore, cointegration exists. We then estimate both the long and short run estimates of the model.

Table 2: F-Bounds Test Result

Test Statistic	Significance	I(0)	I(1)	Actual Sample Size	K	F-Statistic
Finite Sample: n=35						
	10%	2.46	3.46	32	4	
	5%	2.95	4.09			

	1%	4.1	5.53	
Model 1				16.48066
Model 2				11.86535
Model 3				5.420931

4.3 ARDL Long Run Form and Bounds Test Result

From the ARDL estimates for of the long-run coefficient for Model 1, the relationship between ifl and radm is significant and negative. The results show that within the period under review, government recurrent expenditure on administration in Nigeria has a negative effect on inflation in the economy. The results further reveal that recurrent expenditure on transfers (rtra) has a positive and significant relationship with inflation (ifl), implying that when government recurrent expenditure on transfer's increases, inflation will also increase. Government recurrent expenditure on economic services (recs) and recurrent expenditure on social and community services (rscs) are insignificant in explaining Nigeria's long-run inflation trend.

The ARDL estimates for the long run coefficients in Model 2 show significant and positive relationship between inflation and capital expenditure on administration (cadm), suggesting that for the period of estimation, cadm has been associated a rise in inflation rate in Nigerian economy. The results also reveal that capital expenditure on economic services (cecs) and capital expenditure on social and community services (cscs) have a negative and significant relationship with inflation (ifl) - implying that as cecs and cscs increase, inflation rate will increase. Capital expenditure on transfers (ctra) is insignificant in explaining inflation explanation the inflation trend in Nigeria in the long-run.

For Model 3, the long-run ARDL results show that all the variables under consideration (gre, gce, pud, and tax) have statistical significance in explaining inflation in Nigeria. The result indicates that an increase in government capital expenditure, public debt, and tax, do not increase inflation rate in Nigeria. However, government recurrent expenditure has a positive effect on inflation, implying that an increase in overall government recurrent expenditure will cause inflation rate to rise in Nigeria.

Table 3: ARDL Long Run Form and Bounds Test Result

Dependent Variable: ifl **Selected Model: ARDL(4, 0, 2, 4, 4)**				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Model 1: $ifl = \alpha_0 + \alpha_1 \log(radm) + \alpha_2 \log(rscs) + \alpha_3 \log(recs) + \alpha_4 \log(rtra) + \mu_i$				4
log(radm)	-28.40603	8.419118	-3.373991	0.0050
log(rscs)	0.467013	4.631836	0.100827	0.9212
log(recs)	3.384372	5.098376	0.663814	0.5184
log(rtra)	20.76631	3.836570	5.412728	0.0001
C	41.00572	12.82549	3.197206	0.0070
Model 2: $ifl = \beta_0 + \beta_1 \log(cadm) + \beta_2 \log(\csc s) + \beta_3 \log(cecs) + \beta_4 \log(ctra) + \psi_i$				5
log(cadm)	147.1252	71.07155	2.070100	0.0628
log(cecs)	-127.6399	61.46778	-2.076533	0.0621
log(cscs)	-32.63588	14.08228	-2.317515	0.0408
log(ctra)	1.023353	1.109742	0.922154	0.3762
C	8.493748	21.36170	0.397616	0.6985

Model 3: $ifl = \delta_0 + \delta_1 \log(gre) + \delta_2 \log(gce) + \delta_3 \log(pud) + \delta_4 \log(tax) + \upsilon_i$

log(gre)	86.91263	9.594865	9.058245	0.0000
log(gce)	-51.81543	4.276793	-12.11549	0.0000
log(pud)	-9.453963	2.547100	-3.711657	0.0030
log(tax)	-47.64126	7.858489	-6.062394	0.0001
C	114.6606	10.44134	10.98141	0.0000

ARDL ERROR CORRECTION REGRESSION RESULT

The variation between the long-run equation and the short-run equation measures the speed of adjustment of inflation resulting from the variations in the fiscal policy variables. From Table 4, the absolute rate of the ECM coefficient for models 1, 2, and 3 are 1.003061 (100%), 0.587155 (58.72%), and 1.256522 (125.65%), respectively, indicating a discrepancy between the short and longrun. The 100% and 125.65% reveal that there are high rates of adjustments, while the 58.72% reveals an average (moderate) rate of adjustment in each period. The coefficients of the residuals indicate that the disequilibrium between long-run and short-run inflationary state in the economy is corrected within a year. The parsimonious results for the error correction term CointEq(-1) are negative and significant, which shows co-integration of the variables.

Table 4 also shows that the coefficients of inflation, when lagged for one period are 0.993871 (99.39%) and 0.387488 (38.75%) for models 1 and 2, respectively, indicating the approximate speed of adjustment. These results imply that if there exist a deviation from equilibrium, 99.39% for model 1 and 38.75% for model 2 are corrected in one quarter as the variable moves towards restoring equilibrium. This shows that there exists a fast speed of adjustment of inflation in model 1 and a slow speed of adjustment of inflation in model 2 - which may reflect little pressure on the variable in restoring equilibrium in the long run due to any disturbance. The speed of adjustment is statistically significant for both models. For model 3, the adjustment speed variable [d(ifl(-1))] was dropped from the result. Further results obtained from the dynamic models indicate that the overall coefficient of determination (R2) shows that about 97.17%, 92.57%, and 94.15%,of inflation rate is explained by the variables in the equations in models 1, 2, and 3, respectively. These results justify the rejection of the hypothesis that components of government recurrent and capital expenditures and fiscal policy do not impact inflation in Nigeria.

The summary of the estimates in Table 4 shows that the coefficient of government recurrent expenditure on social and community services (rscs) has a positive relationship with inflation. The result indicates that a 1% increase in the rscs at the current period is expected to bring about a 21.58% increase in inflation. This outcome contradicts the a priori expectation. Regarding capital expenditure on social and community services (cscs), the coefficient is negative - implying that increasing cscs by 1% will reduce inflation by about 7.71%.

The coefficient of recurrent expenditure on transfers (rtra) is positively related to inflation. Results show that a unit increase in the rtra at the current period is expected to bring about a positive increase of about 16.74% in inflation. Capital expenditure on transfers (ctra), the relationship is negative. This means that a one-unit increase in the ctra will reduce inflation by about 0.695%. The coefficient of capital expenditure on administration (cadm) has a positive relationship with inflation. Results indicate that a one-unit increase in cadm will increase inflation by about 12.71%. Regarding Model 1, recurrent expenditure on administration (radm) was dropped from the parsimonious analysis. This shows that radm is not required to explain inflation in the Nigeria during the period under consideration. The

result on capital expenditure on economic services (cecs) indicates an adverse relationship with inflation. Results show that when cecs is increased by 1%, inflation will reduce by about 14.15%. The result of recs from Model 1 is statistical insignificance in the short run for the current year.

The short-run result of Model 3 as presented in Table 4 shows that total government capital expenditure (gce) has an adverse relationship with inflation. This relationship implies that when total government capital expenditure is increased by 1%, it could bring down inflation rate by about 10.42%. This finding is in line with the findings of [17] and [33]. The possible reason behind this relationship is that government capital spending on infrastructure other essential amenities will reduce the cost of assessing these services from private sources.

The relationship between total government recurrent revenue (gre) and inflation is positive. Results show that a one-unit increase in total government recurrent expenditure will result in about 15.71% increase in inflation. This finding, however, contradicts the work of [34]. A possible explanation for this government recurrent expenditure—inflation relationship is premised on the fact that most recurrent expenditures go directly to the citizens, who then have more money to spend. This happens when the government operates fiscal expansion policy. Regarding tax and inflation, the relationship is negative. Result implies that a 1% increase in tax revenue will reduce inflation by about 22.62%. This finding confirms the fact that one way the government could run a contractionary policy is to increase its tax base. The multiplier effect of this is that the disposal income of the workers will reduce, while profit margins of investors will also reduce. This will further lead to a reduction in demand and decrease in production, and subsequently, a reduction in inflation. Public debt (pud) is insignificant in explaining inflation in the short run, as shown in Model 3 in Table 4.

Table 4: ARDL Error Correction Regression Result

Dependent Variable: ifl Selected Model: ARDL(4, 0, 2, 4, 4)					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	R-Square
Model 1: $ifl = \alpha_0 + \alpha_1 \log(radm) + \alpha_2 \log(rscs) + \alpha_3 \log(recs) + \alpha_4 \log(rtra) + \mu_i$ (4)					**0.971776**
d(ifl(-1))	0.993871	0.082622	12.02909**	0.0000	
dlog(recs)	-0.829347	1.452719	-0.570893	0.5778	
dlog(rscs)	21.58405	2.705025	7.979241**	0.0000	
dlog(rtra)	16.74511	2.569697	6.516376**	0.0000	
*CointEq(-1)**	-1.003061	0.085724	-11.70112**	0.0000	
Model 2: $ifl = \beta_0 + \beta_1 \log(cadm) + \beta_2 \log(\csc s) + \beta_3 \log(cecs) + \beta_4 \log(ctra) + \psi_i$ (5)					**0.925772**
d(ifl(-1))	0.387488	0.092460	4.190867**	0.0015	
dlog(cadm)	12.71023	3.705491	3.430107**	0.0056	
dlog(cecs)	-14.15044	3.685908	-3.839066**	0.0028	
dlog(cscs)	-7.712421	2.671642	-2.886772**	0.0148	
dlog(ctra)	-0.695346	0.278795	-2.494109**	0.0298	
*CointEq(-1)**	-0.587155	0.057700	-10.17606**	0.0000	
Model 3: $ifl = \delta_0 + \delta_1 \log(gre) + \delta_2 \log(gce) + \delta_3 \log(pud) + \delta_4 \log(tax) + \upsilon_i$ (6)					**0.941590**

dlog(gre)	15.71944	4.718581	3.331391**	0.0060
dlog(gce)	-10.42483	2.931036	-3.556707**	0.0039
dlog(pud)	-1.284481	2.759066	-0.465549	0.6499
dlog(tax)	-22.62146	4.417980	-5.120317**	0.0003
*CointEq(-1)**	-1.256522	0.185107	-6.788071**	0.0000

4. CONCLUSION

The impact of fiscal policy on inflation in Nigeria cannot be emphasized as fiscal policy is critical in managing inflation in Nigeria. Nigeria is currently dealing with inflationary pressures, making it critical to investigate how government expenditure and taxation affect the economy's price stability. This study, therefore, investigates the impact of fiscal policy on inflation in Nigeria over the period 1986-2021 using three regression models. Findings reveal that administrative expenditure significantly influences inflation in both recurrent and capital expenditure models, while government transfers and various services impact inflation differently. Model 3 demonstrates that all variables play a significant role in explaining inflation, with government recurrent expenditure having the least long-term inflationary effect, while government capital expenditure, public debt, and tax revenue reduce inflation when increased.

In the short term, diverse fiscal policies in Nigeria have distinct effects on inflation. Results indicate that increased recurrent spending on social and community services and transfers raises inflation. Likewise, higher capital expenditure on administration increases inflation, while the opposite holds true for capital expenditure on economic services, social and community services, and transfers. Total government recurrent expenditure has a positive impact on inflation, whereas higher government capital spending and tax reductions lower inflation.

The study suggests that the Nigerian government can use fiscal policy to control inflation by increasing capital expenditure in economic services, social and community services, and transfers. Additionally, implementing fiscal restraint by raising taxes can help reduce demand through a multiplier effect. Finally, a well-structured fiscal strategy, combined with effective monetary policy, is essential for containing inflationary pressures and promoting economic stability.

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