

## **DOES MONETARY POLICY INFLUENCE GOVERNMENT EXPENDITURE IN NIGERIA?**

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### **ABSTRACT**

Monetary policies and government expenditure are interrelated and can influence the economic landscape of any economy. Effective coordination between these policy domains is therefore paramount to uphold macroeconomic stability and promote sustainable growth. This study examined the impact of monetary policies on government expenditure in Nigeria. The study investigates the relationship between monetary variables, including money supply, interest rate, inflation, and exchange rate; and government expenditure as a percentage of GDP, treated as the dependent variable. The theoretical framework is rooted in the principles of the Modern Monetary Theory (MMT). The Autoregressive Distributed Lag (ARDL) methodology was employed to analyze the relationship among the selected monetary policy variables and government expenditure. The study reveals a positive relationship between money supply and government expenditure, emphasizing that the management of money supply by the central bank significantly influences government spending. Additionally, the results indicate that short-term fluctuations in inflation do not exert a significant impact on government expenditure. In light of these findings, it is recommended that policymakers concentrate on a dual approach, combining sustainable fiscal policies with effective collaboration between fiscal and monetary authorities.

*Keywords:* money supply, interest rate, inflation, exchange rate, government expenditure

**JEL Classifications:** E51, E62, E63

### **1. INTRODUCTION**

Monetary policy and government spending play crucial roles in shaping the economic landscape of any economy. The coordination between these two policy domains is essential to ensure macroeconomic stability and sustainable growth. For instance, when the government increases its spending on infrastructure projects, it can stimulate economic activity, create jobs, and improve productivity. However, increased government spending can also put pressure on inflation and the country's fiscal position (Mehrra & Sujoudi, 2015; Miyamoto *et al.*, 2019). In such cases, the central bank may use monetary policy tools to control inflation by adjusting interest rates or managing liquidity in the banking system. Obute *et al.* (2020) explained that an inflation rate higher than 8% may inhibit growth in the economy. However, double-digit inflation rate has been recorded in Nigeria since year 2016. For instance, the average rate of inflation was 15.6% in 2016, 12.1% in 2018, 13.2% in 2020 and 23.7% in 2023 (Central Bank of Nigeria (CBN), 2023a).

Inflation can increase the demand for social welfare programs, such as unemployment benefits, food subsidies, and social security payments (Anderson *et al.*, 2018). As prices rise, individuals

and households may experience financial difficulties and require additional support from the government to meet their basic needs. This can lead to increased government spending on social safety nets and poverty alleviation programs. In response to inflationary pressures, the government may need to adjust its budget priorities and allocations. It may need to reallocate funds from other areas to mitigate the impact of rising prices or prioritize inflation-control measures (Mehrara & Sujoudi, 2015).

Conversely, monetary policies can impact government spending by influencing borrowing costs, exchange rates, and access to credit (Haug, 2021). Higher money supply and interest rates, for example, may increase the government's borrowing costs and affect its ability to fund development projects (Chugunov *et al.*, 2021; Mehrara & Sujoudi, 2015; Yong & Dingming, 2019). Again, an increase in the money supply, if not accompanied by a corresponding increase in economic output, can lead to lower interest rates. Lower interest rates can reduce the cost of government borrowing, making it cheaper for the government to finance its spending. Therefore, close coordination and communication between the central bank and the government are essential for ensuring a harmonized approach to economic management.

Furthermore, exchange rate fluctuations affect the cost of imports and exports, which ultimately impacts government spending. Again, due to capital scarcity in Less Developed Countries (LDCs), there is a high dependence on external financing. Therefore, a significant inflow of foreign exchange, triggered by foreign financing, leads to an appreciation of the exchange rate and reduction in traded output (Ferrara *et al.*, 2021; Shen *et al.*, 2018). However, because government spending is impacted by exchange rates, this might make inflationary pressures on the economy worse (Tukur *et al.*, 2023).

As one of the fastest growing African economies and the most populous nation on the continent, Nigeria faces unique challenges and opportunities in managing its exchange rate and government expenditures. When the Nigerian Naira depreciates against other currencies, the cost of imported goods and services increases. This can impact the government's spending on imported goods, such as machinery, equipment, and raw materials. Higher import costs can put pressure on the government's budget, especially if it relies heavily on imported goods for infrastructure development or public projects (Chugunov *et al.*, 2021). Conversely, when investors perceive a stable exchange rate environment, they are more likely to invest in an economy, which can lead to increased economic activity (Rufai *et al.*, 2022). This, in turn, may provide the government with additional resources to allocate to various sectors and projects.

On one hand, the Nigerian government has implemented a range of policies to promote economic development. These include an increase in infrastructure spending, investment in the energy sector, and tax incentives for businesses. The government has also implemented reforms to improve the efficiency of the public sector, reduce corruption, and promote transparency (Abdulrasheed, 2017; Idenyi *et al.*, 2016). All these have significantly increased government spending over the years. For instance, government national expenditure averaged N1,077,196.44 (about \$1,200) between 2010 and 2023. The highest level of expenditure for the period was recorded in 2020, with the total expenditure standing at over N2.3 million (about \$2,600) (CBN, 2023b). These government expenditures have a significant influence on economic growth (Onifade *et al.*, 2020). On the other hand, various monetary policies have also been implemented in order to ensure a stable economy. The monetary policy rate has been reviewed from 6.25% in 2010, to 11% in 2015, 11.5% in 2020 and 18.75% in 2023 (CBN, 2023c). Considering the profound impact monetary policies can have on government spending, it becomes paramount to empirically examine the relationship between government spending and monetary policy in Nigeria. This study therefore seeks to examine how various tools of

monetary policies such as money supply, interest rate, inflation and exchange rate influence government spending in Nigeria. This is the crux of this study.

The subsequent sections of this paper are structured as follows: Section 2 presents the review of conceptual, theoretical and empirical literature; while section 3 explains the methodology that was used. Section 4 presents and discusses the results of the analysis and section 5 concludes the study by providing relevant recommendations.

## **2. LITERATURE REVIEW**

Monetary policy refers to the actions taken by the central bank of a country to control the money supply and influence interest rates, with the aim of achieving macroeconomic stability and promoting economic growth (Central Bank of Nigeria, 1992). In Nigeria, the central bank is known as the Central Bank of Nigeria (CBN), and it is responsible for formulating and implementing monetary policies.

The primary objectives of monetary policies in Nigeria are price stability, exchange rate stability, and sustainable economic growth. The CBN employs various tools to achieve these objectives, such as open market operations (buying or selling government securities), reserve requirements, discount rates, and the management of the foreign exchange market. These measures help regulate inflation, stabilize the value of the Nigerian Naira, and encourage investment and lending activities (CBN, 1992; Nwoko *et al.*, 2016).

Government spending refers to the utilization of public funds by the Nigerian government for various purposes, including infrastructure development, social services, defense, and public administration (Onodugo *et al.*, 2017). In Nigeria, government spending is largely influenced by the annual budget, which outlines the allocation of funds across different sectors and programs. The government's spending priorities in Nigeria are shaped by socioeconomic development goals, such as poverty reduction, job creation, and improving public infrastructure. Government spending is often directed towards sectors like education, healthcare, transportation, power, and agriculture. Public spending also plays a vital role in stimulating aggregate demand, boosting economic growth, and addressing income inequality (Onifade *et al.*, 2020; Shen *et al.*, 2018).

Lucas (1986) describes a complete set of principles for the conduct of a welfare-maximizing fiscal and monetary policy. The paper addresses issues of time-consistency that arise in applying these principles to actual economics. Therefore, there may be a “clash” in the implementation of both monetary and fiscal policy. Monetary policy operates in an indirect manner, primarily through the manipulation of interest rates. These interest rate adjustments impact the conditions for obtaining financing, subsequently influencing both consumer spending and investment activities. While the influence of monetary policy on the real sector, especially in terms of business fixed investment, tends to unfold more gradually and with less certainty, its impact is widespread. Notably, interest rates have a penetrative effect, permeating through various aspects of the economic landscape (Stein, 2013). While both fiscal and monetary policies are stabilization tools, care must be taken when executing activities that aim to stabilize the economy using both policies. Furthermore, Barro (1987) revealed that government spending may also impact on interest rate, consumption, output and investment. The general price level may also be influenced by government spending, depending on the dynamics of the business cycle.

Various empirical researches have been carried out to examine the relationship between monetary policies, government spending and economic growth. Mehrara and Sujoudi (2015)

used nine explanatory variables and 10,000 estimations to create optimal long-term models based on the Bayesian model averaging (BMA) approach. The study showed that liquidity growth rate significantly impacts inflation. Additionally, the relationship between inflation and money growth is a monetary phenomenon, and this relationship is positive. Also, Miyamoto *et al.* (2018) examined the relationship between inflation and government spending. Mixed evidence was found on the response of inflation to unexpected government spending shocks. The results showed a mild response of inflation in periods examined, and the response of Consumer Price Index inflation is bigger than that calculated from the GDP deflator in the Zero Lower Bound (ZLB) period. These findings suggest evidence of a positive inflation response in the ZLB period. However, the difference in the responses of expected inflation in the ZLB and normal periods are more pronounced.

Similarly, the interrelationship between exchange rate and inflation was explored by Tukur *et al.* (2023). The study found that a unidirectional relationship exists between exchange rate and inflation. With a focus on the United States of America (USA), Ferrara *et al.* (2021) corroborated that government spending leads to an appreciation in the exchange rate and increase in inflation. Also, the study revealed that government expenditure shocks trigger trade balance deficit, and ultimately contractionary monetary policy. Furthermore, the relationship between government expenditure and inflation was examined by Klein and Linnemann (2023), with a focus on labour productivity. The study found that government spending increases inflation, and also reduces labour productivity. On the other hand, increased public consumption reduced inflation and increased labour productivity.

As evidenced in the study by Sujianto and Azmi (2020), government spending impacts positively on Gross Domestic Product (GDP), while inflation impacts GDP negatively. High inflation has the potential to diminish productive investments, rendering domestic products excessively expensive for international competitiveness and contributing to economic erosion. This is evident in the declining growth in Indonesia. Dikeogu (2018) found an inverse relationship existed between inflation and government spending, contrary to the findings of Sujianto and Azmi (2020). It was established that capital expenditure negatively impacts inflation, and not vice versa. Dikeogu (2018) also found that money supply exhibits a dual effect on inflation, with both positive and negative impacts, while the exchange rate demonstrates a positive effect on inflation along with a non-significant influence. This is in line with the findings by Tukur (2023).

The findings of Nguyen (2015) again complemented those of Dikeogu (2018) and Tukur (2023). The impact of impact of money supply, fiscal deficit, government spending and interest rate on inflation was analysed by Nguyen (2015) using the Pooled Mean Group (PMG) and General Method of Moment (GMM) techniques. The study found that broad money supply significantly impacted inflation in the selected Asian countries. Also, all the other monetary variables examined positively impacted inflation. Again, Mahara (2020) revealed that money supply has a positive and significant impact on economic growth. In another vein, the study by Akighir and Zakari (2020) revealed that inflation, foreign debts and government spending positively impacted exchange rate. This is similar to the findings of Ferrara *et al.* (2021).

Moreover, Shen *et al.* (2018) asserted that government spending which is triggered by large external financing causes an appreciation of the exchange rate. However, Feng *et al.* (2021) and Kim (2020) opined differently. On one hand, Feng *et al.* (2021) revealed that an increase in government spending causes exchange rate to be significantly volatile. On the other hand, focus was given to government expenditure shocks in the study by Kim (2020). The study revealed that government expenditure shocks lead to real exchange rate depreciation. The study

by Amaegberi *et al.* (2020) also showed that exchange rate dynamics can influence the performance of some economic sectors. Their study examined the impact of exchange rate on the performance of the agricultural sector and found that higher exchange rate led to lower agricultural productivity. The impact of monetary policy on sectoral performance was also examined by Agbonrofo and Ajibola (2023). Their study used the panel ARDL model and the findings show that monetary policies such as domestic credits, and bank lending rates are significant predictors of the manufacturing sector performance in the CFA Franc Zone. Again, Yong and Dingming (2019) examined the relationship between government spending shocks and interest rate in some selected industrialised countries. They found that interest rate increases when there is an increase in news shocks to government spending. This in turn leads to higher interest rates in the future. Therefore, there is a strong relationship between interest rate and government spending.

The interplay of the tools of fiscal policy has also been examined in the literature. The impact of government spending on public debt was examined by Idenyi *et al.* (2016). Using vector error correction model (VECM), the study found evidence of a long-run economic relationship among the variables tested and determined that government capital and recurrent expenditure had significant positive relationships with public debt in the economy. The study also found that interest rates had an insignificant negative relationship with public debt. In similar research thought, some other researchers have examined the relationship between government spending and economic growth. Abdulrasheed (2017) used the VECM to examine the causality between government spending and government revenue. As expected, increasing government expenditure without increasing government revenue broadened the budget deficit. Therefore, since there is a long run relationship between government revenue and expenditure, it is imperative to ensure stability in fiscal and monetary policy. Babatunde (2018) disaggregated government spending on various sectors of the economy and found that there was an inverse relationship between government spending and agricultural output. The study's findings also indicated that increased government investment in infrastructure did not lead to a corresponding increase in economic growth. This underscores the idea that government spending alone may not result in inclusive growth unless efficiency and equity are considered.

The interrelatedness between monetary and fiscal policies has been further corroborated by Chugnunov *et al.* (2021). The study emphasized that there is a need to prudently apply a mix of monetary and fiscal policies in order to ensure sustainable growth in the economy. Similarly, Nakata (2016) opined that government spending increases welfare benefits, however, a reduction in welfare may mean a reduction in interest rate. Also, Jawadi *et al.* (2015) considered the individual effect of fiscal and monetary policies on the economy. Their study found that an increase in bank rate contracted economic activities and on the other hand, government spending increased output and did not crowd-out private investment. This is contrasted by the findings of Onifade *et al.* (2020). Their study found that government fiscal expansion further puts pressure on inflation, thus leading to a crowding out effect on the private sector.

The reviewed empirical literature reveals that numerous scholars have concentrated on the influence of government spending on monetary policies. Furthermore, scholars have conducted research on the interconnected dynamics of monetary policies. In contrast, the reciprocal relationship has received comparatively less attention, and this forms the central focus of our study.

### **3. METHODOLOGY**

This study hinges on the Modern Monetary Theory (MMT). MMT is an economic framework that challenges conventional beliefs about government spending, taxation, deficits, and the role of monetary policies in the economy. The theory proposes that there is no constraint to government spending in an economy inasmuch as the economy issues its own currency (Globerman, 2021; Palley, 2014). However, if money supply keeps increasing relative to the output level, inflation will occur and this will devalue the money. From the foregoing, the main independent variable is money supply (MSS). This is based on the evidence by the connections elucidated in Modern Monetary Theory and other discussions concerning monetary policy (Palley, 2014). The dependent variable for this study is therefore government expenditure (GEX) proxy by general government final consumption expenditure as percentage of GDP. These analyses underscore the interrelation between government expenditure and money supply in the economy (Globerman, 2021; Haug, 2021; Lucas, 1986; Mehrara & Sujoudi, 2015). Other monetary variables include the lending interest rate (LIR), inflation (INF), and exchange rate (EXC). The literature has revealed that these variables have a relationship with government spending (Akighir & Zakari, 2020; Ferrara *et al.*, 2021; Kim, 2015; Klein & Linnemann, 2023)

To determine the responsiveness of government expenditure to monetary policies, the following functional equation is specified:

$$GEX_t = \beta_0 + \beta_1 MSS_t + \beta_2 INT_t + \beta_3 INF_t + \beta_4 EXC_t + \mu_t \quad \text{Eq. 1}$$

Where:

$\beta_0$ = Constant,  $\beta_1 - \beta_4$ = Coefficients,  $\mu$  = Error term and “*t*” reveals the time element

The Autoregressive Distributed Lag (ARDL) estimation technique as proposed by Pesaran and Shin (1999) is used for analysis. The use of the ARDL analysis method is driven by its adaptability in accommodating variables that possess both integrated order I(0) and I(1) characteristics. The ARDL form of equation 1 above is therefore specified as follows:

$$\Delta GEXR_t = \beta_0 + \beta_1 lMSS_{t-1} + \beta_2 lINT_{t-1} + \beta_3 lINF_{t-1} + \beta_4 lEXC_{t-1} + \sum_{i=1}^m a_1 \Delta GEX_{t-1} + \sum_{i=1}^m a_2 \Delta LMSS_{t-1} + \sum_{i=1}^m a_3 \Delta INT_{t-1} + \sum_{i=1}^m a_4 \Delta INF_{t-1} + \sum_{i=1}^m a_5 \Delta EXC_{t-1} + \mu_t \quad \text{--Eq. 2}$$

Where:

*l*= natural log of the variables

$\Delta$ = first difference operator

$a_1 - a_6$  = dynamic parameters of the independent variables in the short run

The error correction mechanism of this short run relationship is as follows:

$$\Delta GEX_t = \beta_0 + \sum_{i=1}^m a_1 \Delta GEX_{t-1} + \sum_{i=1}^m a_2 \Delta LMSS_{t-1} + \sum_{i=1}^m a_3 \Delta INT_{t-1} + \sum_{i=1}^m a_4 \Delta INF_{t-1} + \sum_{i=1}^m a_5 \Delta EXC_{t-1} + \lambda_1 ECM_{t-1} + \mu_t \quad \text{--Eq. 3}$$

A negative (-) value of  $\lambda_1$  indicates that when there are sudden changes in all the variables, the short-term imbalances will eventually return to the long-term balance.

#### 4. PRESENTATION AND DISCUSSION OF FINDINGS

**Table 1: Descriptive Statistics**

	GEX	MSS	LIR	EXR	INF
Mean	4.1379	9.93E+12	18.53281	122.9967	19.44256
Median	3.2758	1.95E+12	17.69	123.1931	12.7072

Maximum	9.44834	4.38E+13	31.65	401.152	72.8355
Minimum	0.911235	2.36E+10	9.959167	1.754523	5.388008
Std. Dev.	2.97794	1.31E+13	4.056755	109.2979	17.57477
Skewness	0.491052	1.16953	0.824816	0.861062	1.737863
Kurtosis	1.763443	3.088918	4.847184	3.019887	4.700181
Observations	36	36	36	36	36

Source: Authors' Computation

Table 1 presents the descriptive statistics of the variables used in this study. On average, government expenditure (GEX) is about 4.14 percent of the Gross Domestic product (GDP), money supply (MSS) is approximately N9.93 trillion, the lending interest rate (LIR) is around 18.53 percent, the exchange rate (EXR) is approximately N123 to \$1, and the inflation rate (INF) is roughly 19.44 percent. The maximum value indicates the highest recorded value in the dataset. For instance, the maximum government expenditure (GEX) as a percent of the GDP is 9.45 percent, maximum money supply (MSS) is N43.8 trillion, maximum lending interest rate (LIR) is 31.65 percent, maximum exchange rate (EXR) is N401.15 to \$1, and maximum inflation rate (INF) is 72.84 percent. The minimum value represents the lowest recorded value in the dataset. For instance, the minimum government expenditure (GEX) as a percent of the GDP is 0.91, minimum money supply (MSS) is N23.6 billion, minimum long-term interest rate (LIR) is 9.96 percent, minimum exchange rate (EXR) is N1.75, and minimum inflation rate (INF) is 5.39 percent.

The standard deviation measures the dispersion or spread of the data. A higher standard deviation indicates greater variability. Skewness measures the asymmetry of the data distribution. A positive skew indicates that the data is skewed to the right, while a negative skew indicates a skew to the left. GEX and MSS has a positive skew, indicating a slight rightward skew in its distribution. Kurtosis measures the "tailedness" of the data distribution. High kurtosis indicates heavy tails, while low kurtosis indicates light tails. The LIR, EXR and INF all have positive skewness as well. All the variables have positive kurtosis.

The unit root test is presented in Table 2. GEX, LMSS, and EXR have test statistics with absolute values greater than the critical values at the 5% significance level for both ADF and PP tests. This suggests that the variables are non-stationary (I(1)), meaning they exhibit some form of trend or non-constant behaviour over time. The inflation rate (INF) stands out as it has a test statistic with an absolute value less than the critical value at the 5% significance level in both ADF and PP tests. This suggests that the inflation rate is stationary (I(0)), meaning it does not exhibit a trend and has a constant mean and variance over time.

**Table 2: Test of Unit Root**

Augmented Dickey Fuller (ADF) Unit Root Test				Phillip-Perron (PP) Unit Root Test		
Variable	Critical Value	T-Statistics (@ 5% significance)	Order of Integration	Critical Value	T-Stat (@5% significance)	Order of Integration
GEX	-6.1555	-2.95112	I(1)	-6.15798	-2.9511	I(1)
IMSS	-3.2411	-2.9511	I(1)	-3.1001	-2.9511	I(1)
EXR	-3.8759	-2.9511	I(1)	-3.7788	-2.9511	I(1)
INF	-3.4237	-2.9511	I(0)	-2.9051	-2.9484	I(0)
LIR	-6.5434	-2.9511	I(1)	-3.0156	-2.9484	I(0)

Source: Authors' Computation

The unit root test results for LIR vary between the two tests. Specifically, the PP test indicates that LIR is stationary in its original form (level), while the ADF test suggests that LIR becomes stationary when differenced once (first difference). This mix of stationary states at both the level and first difference indicates that the Autoregressive Distributed Lag (ARDL) approach is the most suitable method for conducting further analysis.

Table 3 presents the findings from the ARDL analysis. The coefficients for GEX(-1) and GEX(-2) are 0.3166 and 0.3595, respectively. These results represent the estimated impact of past values of government expenditure (GEX) on the current value of the dependent variable. These results are significant at 10 percent. A unit increase in GEX will increase GEX by 32 percent in the current period. This may not be unexpected as government expenditure keeps rising.

The coefficients for LMSS and LMSS (-1) are 7.0378 and -6.7008, respectively. These represent the estimated impact of the current and lagged values of the logarithm of money supply (LMSS) on GEX. This shows that a percent increase in money supply will increase government expenditure by over 700 percent. However, in the first lag, further increase in money supply will reduce government expenditure by over 600 percent. The coefficients for EXR, EXR(-1), and EXR(-2) are -0.0121, -0.0085, and 0.0255, respectively. These represent the estimated impact of the current and lagged values of the exchange rate (EXR) on government expenditure. EXR only significantly impacts GEX in the second lag. The results of the EXR in the current year and first lag is however not significant. The coefficients for INF and LIR are -0.0058 and -0.0638, respectively. These represent the estimated impact of the current values of inflation (INF) and lending interest rate (LIR) on GEX, though not significantly.

**Table 3: ARDL Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GEX(-1)	0.316564	0.181964	1.73971	0.0947***
GEX(-2)	0.359468	0.180857	1.98758	0.0584***
IMSS	7.037804	1.676022	4.199112	0.0003*
IMSS(-1)	-6.700849	1.662206	-4.0313	0.0005*
EXR	-0.012096	0.010175	-1.188718	0.2462
EXR(-1)	-0.008548	0.016009	-0.53393	0.5983
EXR(-2)	0.025501	0.011794	2.162123	0.0408**
INF	-0.005773	0.013411	-0.430465	0.6707
LIR	-0.063774	0.07057	-0.903689	0.3751
C	-8.35204	7.945601	-1.051153	0.3037

\*\*\*, \*\* and \* indicates 1%, 5% and 10% level of significance

R-squared	0.906912	Mean dependent var	4.27657
Adjusted R-squared	0.872003	S.D. dependent var	3.007951
S.E. of regression	1.076143	Akaike info criterion	3.224573
Sum squared resid	27.79402	Schwarz criterion	3.673502
Log likelihood	-44.81773	Hannan-Quinn criter.	3.37767
F-statistic	25.97993	Durbin-Watson stat	2.170749
Prob(F-statistic)	0.00000		

Source: Authors' Computation



The results suggest that past levels of government expenditure significantly influence current government spending. An increase in money supply can provide the government with more funds to finance its programs and projects. When the money supply expands, there is a greater amount of currency in circulation and more deposits in banks. This can translate into higher tax revenues and easier access to credit markets, allowing the government to fund its initiatives. This finding is related to that of Mehrara and Sujoudi (2015), however, the authors found that it is government spending that causes money supply to increase. Mahara (2020) also found that money supply positively and significantly impacted on economic growth in Nepal. Similarly, the positive impact of money supply on government expenditure reveals that the central bank's management of money supply directly affects government expenditure.

Furthermore, the result indicates that short-term changes in inflation do not significantly affect government expenditure. This is quite different from the study of Ferrara *et al.* (2021) which found a significant and positive relationship between government spending and inflation in the USA. This study also found that there is a negative relationship between the lending interest rate and government expenditure. Reduced interest rates can lower the expenses associated with government borrowing, resulting in more cost-effective means for the government to fund its expenditure. This, in turn, can provide an incentive for increased government spending. Furthermore, while interest rate management is important for overall economic stability, short-term fluctuations in lending rates might not be a primary driver of government expenditure. Contrary to this finding, Miyamoto *et al.* (2018) suggests that the interest rate directly influences inflationary pressures in the economy. However, the finding of this study corroborates that of Idenyi *et al.* (2016) which also found interest rate and money supply are inversely related in their relationship with economic output. Also, the findings on exchange rate and government spending in the second lag corroborates the findings of Amaegberi *et al.* (2020) suggesting that exchange rate have an inverse relationship with government expenditure.

R-squared is 0.9069, which means that approximately 90.69% of the variation in the dependent variable is explained by the independent variables included in your regression model. The adjusted R-squared is 0.8720, which is slightly lower than the R-squared. This suggests that the independent variables included in the model are relevant and contribute to its explanatory power. The F-statistic tests the overall significance of the regression model. The F-statistics suggests that the model is statistically significant.

**Table 4: Long Run and Bounds Test**

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	3.22105	10%	2.2	3.09
k	4	5%	2.56	3.49
		2.50%	2.88	3.87
		1%	3.29	4.37

Source: Authors' Computation

As seen in Table 4, the F-stat is greater than I(1) at 10 percent level of significance, therefore, we can reject the null hypothesis of no long-run relationship, implying there is a long-run relationship among the variables.

**Table 5: Error Correction Form Result**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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D(GEX(-1))	-0.3595	0.14126	-2.5448	0.0178
D(IMSS)	7.0378	1.18373	5.94545	0.0000
D(EXR)	-0.0121	0.00839	-1.441	0.1625
D(EXR(-1))	-0.0255	0.00922	-2.7645	0.0108
CointEq(-1)*	-0.324	0.06704	-4.8325	0.0001

Source: Authors' Computation

The result of the error correction model (ECM) is presented in Table 5. The coefficient of the DGEX suggests that a one-unit increase in the lagged government expenditure (GEX) is associated with a decrease of approximately 0.3595 units in GEX in the short term. Similarly, a one-unit increase in the difference of the EXR is associated with a decrease of 0.026 units in the short term. However, there is a positive relationship between the difference of the lagged value of MSS and GEX in the short term. An increase in LMSS will approximately increase GEX by 7.0378 units in the short term. CointEq. term captures the adjustment process back to the long-term equilibrium relationship after any short-term deviations. In the model, 32% of distortion in the short run is corrected back to equilibrium in the long term.

**Table 6: Diagnostic Result**

Test	F-Stat	prob-Value
Serial Correlation Test	0.9900	0.3875
Ramsey Reset Test	0.2735	0.6060
Heteroskedasticity Test	0.7678	0.6465
Normality Test	5.0330	0.0807

Source: Authors' Computation

The diagnostic tests revealed in Table 6 suggests that the model has a good fit. Since all the results are statistically insignificant at 5 percent, it shows that the model does not suffer from serial correlation, model instability, heteroscedasticity and abnormal distribution.

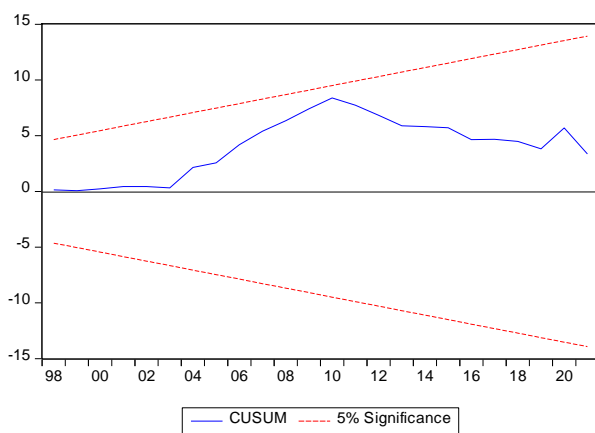


Figure 1: Cusum

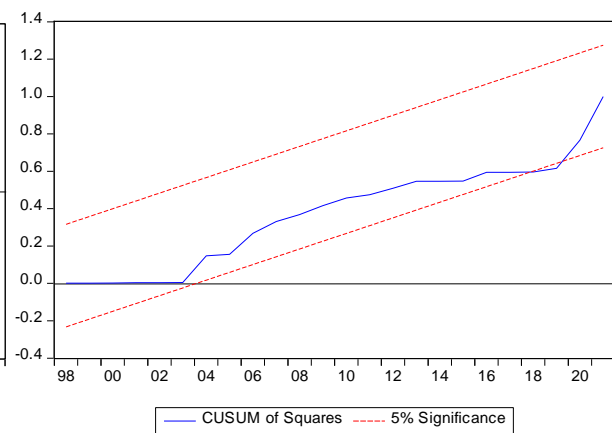


Figure 2: Cusum of Squares

The stability and accuracy of the model was also tested and the results of the cusum and cusum of squares presented in Figure 1 and Figure 2 shows that the model is relatively stable.

## 5. CONCLUSION AND RECOMMENDATION

This study examines the impact of monetary policy on government expenditure in Nigeria. Findings emphasize the importance of coordination between monetary and fiscal authorities in Nigeria to align policies and achieve fiscal and economic goals. Additionally, a thorough

understanding of the dynamics between monetary policy and government expenditure can help policymakers make informed decisions to promote economic stability and sustainable fiscal management. While exchange rates, inflation, and lending interest rates are important for overall economic stability, their short-term fluctuations might not have a direct and immediate impact on government spending decisions.

From the foregoing, it is important for the government to plan and manage government expenditures, considering the historical trajectory of spending. Sustainable fiscal policies that balance short-term needs with long-term fiscal responsibility are crucial. Also, policymakers should focus on a combination of sustainable fiscal policies and effective coordination between fiscal and monetary authorities to ensure responsible and effective management of government expenditure in Nigeria. Lastly, the Central Bank of Nigeria (CBN), should continue to regulate money supply and interest rates vis-à-vis government spending in the economy. While doing this, focus should be given to monitoring inflation and ensuring broader economic stability.

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