



## IMPACT OF FISCAL POLICY ON INFLATION IN NIGERIAN ECONOMY

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**ABSTRACT:** *This paper examines the impact of fiscal policy on inflation in Nigeria for the period 1981-2021. The study adopts autoregressive distributed lag (ARDL) bounds testing approach. The unit root results revealed that other variables apart from inflation were stationary after first difference. The bound test result shows that the variables cointegrate. The ARDL long-run result shows that oil revenue has a negative significant impact on inflation, while government recurrent expenditure and capital expenditure have positive impact on the inflation, with the impact of recurrent expenditure significant. The results further showed that the impacts of oil revenue, recurrent expenditure, and capital expenditure in long-run was also maintained in the short run. Lastly, exchange rate and total imports have negative impact on inflation, while foreign direct investment inflow has a positive impact on inflation in both long- and short-run. The government should review her fiscal policy to adjust recurrent and capital expenditure, and to reduce import by encouraging consumption of local products.*

**KEYWORDS:** Autoregressive Distributed Lag, Co-Integration, Fiscal Policy, Inflation,



## INTRODUCTION

Fiscal policy is a policy that nations use to narrow down their public expenses with the aim of monitoring and influencing the economy (Agu et al., 2015). Fiscal policy is used by central banks to control the balance of macroeconomic (Surjaningsih et al., 2012) and to maintain high and sustained rates of economic growth and stable inflation (Asandului et al., 2021), and to achieve favourable balance of payment. Inflation is one of the macroeconomic challenges (Egbulonu & Wobilor, 2016) which has a negative effect on the living standard of the people (Ahuja, 2013), some economic variables (Akobi et al., 2021), and it causes social and economic instability (Anyanwu, 2011). However, according to Keynesian view, for a government to maintain a stable economy and a maximized productivity, the government needs to engage in public spending. Inflation can be caused by fiscal policy especially when the government fails to settle its debts.

Ozurumba (2012) investigated the relationship between fiscal policy and inflation in Nigeria using data spanning from 1970-2009. By employing the techniques of autoregressive distributed lag (ARDL) and causality techniques, the findings revealed that there is a negative association between fiscal deficit and inflation.

Otto and Ukpere (2015) examined the impact of fiscal policy on inflation in Nigeria over a period of 32 years. They applied the method of ordinary least square, and the findings showed that the impacts of fiscal policy on inflation was insignificant.

Surjaningsih et al. (2012) studied the impact of fiscal policy on the output and inflation for the period 1990Q1-2009Q4. Adopting the VECM method, the results showed that there was cointegration relationship between government spending, taxation, and inflation. The results furthered showed that government spending had a negative impact on inflation, and a positive impact on output.

Nguyen et al. (2022) studied the impact of fiscal and monetary policy on inflation in Vietnam over the period 1997-2020. By applying vector autoregressive (VAR) model, the results from the VAR showed that the Vietnam's inflation was positively influenced by fiscal deficit, government expenditure, and interest rate. The results further showed that the impact of government expenditure on inflation was significant.

Our research focuses on the relationship between fiscal policy and inflation in Nigeria. The major objectives of this study are: (1) to determine if a long run relationship exists between the variables of interest; (2) to find out the magnitude of the effect of the variables of interest on inflation both in the long- and short-run; (3) to check the stability of the estimated parameters.

Further in this study, we carried out a unit root and an autoregressive distributed lag (ARDL) cointegrated, which allowed us to detect both the long- and the short-run relationships. The essence of the unit root test was to ensure that no variable integrated of order great than one is included in the model.



## MATERIAL AND METHOD

### Variable Description

This study uses data spanning from 1981 to 2021 Central Bank of Nigeria (CBN) Statistical Bulletin and World Development Indicator (WDI). We adopted inflation (INF) as the dependent variable, fiscal policy (FP) measured by oil revenue (OR), recurrent expenditure (RE), and capital expenditure (CE) as the predictor variables, and exchange rate, foreign direct investment inflow, and total imports as the control variables. The data on oil revenue, recurrent expenditure, and capital expenditure were extracted from Central Bank of Nigeria (CBN) Statistical Bulletin, while inflation rate, exchange rate, foreign direct investment inflow, and total imports are collected from World Development Indicators (WDI). In order to reduce heteroscedasticity of the variables employed in this study, we obtained the log transformation of the raw data. The origin data are presented in Figure 1 and transformed data in Figure 2. The mathematical linear model is given as follows:

$$INFR_t = f(FP_t, EXR_t, FDII_t, TIMP_t) \quad (1)$$

where:  $INFR_t$  is the inflation rate,  $FP_t$  is the fiscal policy

Equation 1 is rewritten as:

$$INFR_t = \alpha + \beta_1 OR_t + \beta_2 RE_t + \beta_3 CE_t + \gamma EXR_t + \delta FDII_t + \vartheta TIMP_t + \varepsilon_t \quad (2)$$

where:  $\alpha$ ,  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  are the parameters to be estimated which indicate the long run and short run concerning OR, RE and CE respectively;  $\gamma$ ,  $\delta$ , and  $\vartheta$  are the estimated parameters of the control variables EXR, FDII, and TIMP respectively;  $\varepsilon_t$  is the error term which is assumed to be identical and independently distributed with mean zero and with constant variance; other variables remained as defined previously.

### Autoregressive Distributed Lag (ARDL) Bounds Test for Cointegration

The ARDL bounds test approached developed by Pesaran et al. (2001) is normally employed to examine the long run and cointegration between variables that are either stationary or integrated of order one, i.e.,  $I(0)$  or  $I(1)$ . It also deals with dependent and predictor variables with different lags. ADRL is well known for its ability of dealing with small samples sizes (Babajide & Lawal, 2016; Bekhet & Matar, 2013; Ozturk & Acaravci, 2010). ARDL is usually denoted as  $ARDL(p, q_1, q_2, \dots, q_k)$ , where  $p$  is the maximal number of lags for the dependent variable,  $q_i$  is the maximal number of lags for the  $i$ th predictor variables. However, predictor variables with one or more lags is known as dynamic regressors, while a predictor variables without any lagged term are known as fixed regressors.

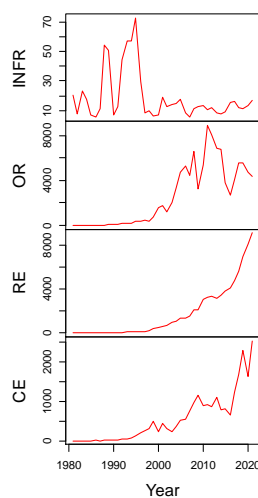


Figure 1. Plot for the original data (1981-2021)

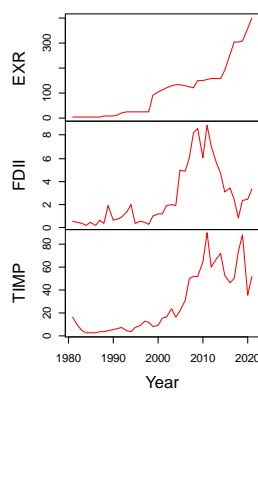
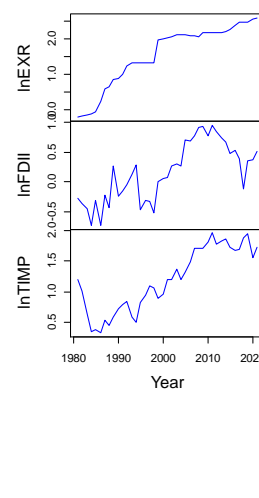
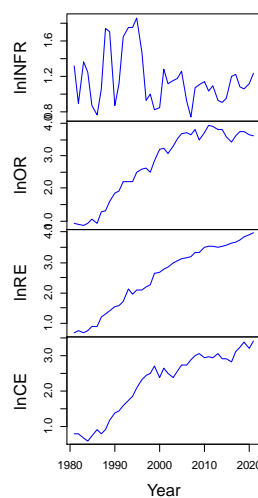


Figure 2. Plot for the transformed data



To model ARDL model to the data of interest in this study, we start by checking if there is unit root in the variables using the Augmented Dickey-Fuller (ADF) test developed by Dickey and Fuller (1979) and Phillips-Perron test developed by Phillips and Perron (1988); after which we progressed by estimating the long-run relationships in the variables. The ARDL model for the long-run relationship between inflation, fiscal policy, exchange rate, foreign direct investment inflow, and total imports is given as follows:

$$\begin{aligned}
 \Delta \ln INFR_t = & \alpha_1 + \beta_{1i} \sum_{i=j}^p \Delta \ln INFR_{t-i} + \beta_{2i} \sum_{i=j}^{q_1} \Delta \ln OR_{t-i} + \beta_{3i} \sum_{i=j}^{q_2} \Delta \ln RE_{t-i} \\
 & + \beta_{4i} \sum_{i=j}^{q_3} \Delta \ln CE_{t-i} + \gamma_{1i} \sum_{i=j}^{q_4} \Delta \ln EXR_{t-i} + \delta_{1i} \sum_{i=j}^{q_5} \Delta \ln FDI_{t-i} \\
 & + \vartheta_{1i} \sum_{i=j}^{q_6} \Delta \ln TIMP_{t-i} + \varphi_1 \ln INFR_{t-1} + \varphi_2 \ln OR_{t-1} + \varphi_3 \ln RE_{t-1} \\
 & + \varphi_4 \ln CE_{t-1} + \varphi_5 \ln EXR_{t-1} + \varphi_6 \ln FDI_{t-1} + \varphi_7 \ln TIMP_{t-1} \\
 & + \varepsilon_{1t} \quad (3)
 \end{aligned}$$

where:  $\Delta$  is the first difference operator;  $\varepsilon_t$  is the white noise;  $\varphi_1, \dots, \varphi_7$  are the long run components;  $p$  is the lag of the dependent variable;  $q_1, \dots, q_6$  are lag lengths;  $j = 0, \dots, k$ , other variables are remained as previously defined.

The next step is to investigate the null hypothesis of no cointegration against the alternative hypothesis of cointegration, using the bounds test method. The null hypothesis is  $H_0: \varphi_1 = \varphi_2 = \dots = \varphi_7 = 0$  and the alternative hypothesis is  $H_a: \varphi_1 \neq \varphi_2 \neq \dots \neq \varphi_7 \neq 0$ . The decision here is that the cointegration exists only when the F-statistic is greater than the upper bound of 5 per cent (5%) level, otherwise there is no cointegration.



However, if cointegration is present, the ARDL model is specified by selecting the optimal lag for the variables with the help of Akaike Information Criterion (AIC). Once the ARDL has been selected using the AIC, we then estimate the long run relationship in the variables and the error correction model. The long run and short run estimates of ARDL are given in equations 4 and 5 respectively.

$$\begin{aligned} \ln INFR_t = & \alpha_2 + \beta'_{1i} \sum_{i=1}^p \ln INFR_{t-i} + \beta'_{2i} \sum_{i=1}^{q_1} \ln OR_{t-i} + \beta'_{3i} \sum_{i=1}^{q_2} \ln RE_{t-i} + \beta'_{4i} \sum_{i=1}^{q_3} \ln CE_{t-i} \\ & + \gamma'_{1i} \sum_{i=1}^{q_4} \ln EXR_{t-i} + \delta'_{1i} \sum_{i=1}^{q_5} \ln FDI_{t-i} + \vartheta'_{1i} \sum_{i=1}^{q_6} \ln TIMP_{t-i} \\ & + \varepsilon_{2t} \end{aligned} \quad (4)$$

$$\begin{aligned} \Delta \ln INFR_t = & \alpha_3 + \beta''_{1i} \sum_{i=j}^p \Delta \ln INFR_{t-i} + \beta''_{2i} \sum_{i=j}^{q_1} \Delta \ln OR_{t-i} + \beta''_{3i} \sum_{i=j}^{q_2} \Delta \ln RE_{t-i} \\ & + \beta''_{4i} \sum_{i=j}^{q_3} \Delta \ln CE_{t-i} + \gamma''_{1i} \sum_{i=j}^{q_4} \Delta \ln EXR_{t-i} + \delta''_{1i} \sum_{i=j}^{q_5} \Delta \ln FDI_{t-i} \\ & + \vartheta''_{1i} \sum_{i=j}^{q_6} \Delta \ln TIMP_{t-i} + \omega ECT_{t-1} + \varepsilon_{3t} \end{aligned} \quad (5)$$

where:  $\omega$  is the speed of adjustment;  $p$  and  $q_1$  are the maximal lag lengths of dependent and predictor variables respectively obtained by AIC and SBC. The error correction term (ECT) coefficient can be obtain using the following:

$$\begin{aligned} ECT_t = & \ln INFR_t - \alpha_2 - \beta'_{1i} \sum_{i=1}^p \ln INFR_{t-i} - \beta'_{2i} \sum_{i=1}^{q_1} \ln OR_{t-i} - \beta'_{3i} \sum_{i=1}^{q_2} \ln RE_{t-i} \\ & - \beta'_{4i} \sum_{i=1}^{q_3} \ln CE_{t-i} - \gamma'_{1i} \sum_{i=1}^{q_4} \ln EXR_{t-i} - \delta'_{1i} \sum_{i=1}^{q_5} \ln FDI_{t-i} \\ & - \vartheta'_{1i} \sum_{i=1}^{q_6} \ln TIMP_{t-i} \end{aligned} \quad (6)$$

### ARDL Model Diagnostics and Stability Checking

The selected ARDL model is tested for adequacy using the Breusch-Godfrey LM test for serial correlation, Breusch-Pagan-Godfrey for heteroscedasticity, Jarque-Bera test of normality for residuals, and Ramsey Reset test or linearity, and for stability using the coefficient cumulative sum (CUSUM) and cumulative sum square (CUSUMSQ) to check the stability of both the long run and short run (Brown et al., 1975).



## RESULTS AND DISCUSSION

The summary statistics of the variables are presented in Table 1. The Inflation rate (INFR) has a mean value of 18.949 lying within the range of 5.400-72.800 and a standard deviation of 16.660. Oil Revenue (OR) has a mean value of ₦2533.523 billion lying within the range of ₦7.250 - ₦8878.970 billion and a standard deviation of ₦2694.566 billion; Recurrent Expenditure (RE) has a mean value of ₦1781.417 billion lying within the range of ₦4.750 – ₦9145.160 billion and a standard deviation of ₦2393.517 billion; and Capital Expenditure (CE) has a mean value of ₦551.773 billion lying within the range of ₦4.100 – ₦2522.470 billion and a standard deviation of ₦629.595 billion. For the determinants of Inflation, Exchange rate (EXR) has a mean value of ₦108.115 per \$1 lying within the range of ₦0.620 – ₦402.310 per \$1 and a standard deviation of ₦110.047 per \$1; Foreign Direct Investment Inflow (FDII) has a mean value of \$2.531 billion lying within the range of \$0.190 – \$8.840 billion and a standard deviation of \$2.536 billion; and Total Imports (TIMP) has a mean value of \$28.257 billion lying within the range of \$2.130 - \$89.780 billion.

The results also show that all the variables are positively skewed, and that OR, EXR, FDII, and TIMP are playkurtic, while INFR, RE, and CE are leptokurtic. It also appears that OR and TIMP are the only normally distributed variables.

**Table 1. Summary Statistics**

	INFR	OR	RE	CE	EXR	TIMP	FDII
Mean	18.949	2533.523	1781.417	551.7732	108.1151	28.25659	2.531463
Median	12.900	1591.680	579.3000	321.3800	111.2300	15.76000	1.870000
Maximum	72.800	8878.970	9145.160	2522.470	402.3100	89.78000	8.840000
Minimum	5.400	7.250	4.750000	4.100000	0.620000	2.130000	0.190000
Std. Dev.	16.660	2694.566	2393.517	629.5947	110.0467	27.01545	2.535859
Skewness	1.853	0.669	1.528908	1.434167	0.981741	0.797455	1.156574
Kurtosis	5.300	2.165	4.624126	4.703626	3.199806	2.303877	3.183399
Jarque-Bera	32.498	4.252	20.47954	19.01320	6.654269	5.173385	9.198160
Probability	0.000	0.119	0.000036	0.000074	0.035896	0.075269	0.010061
Sum	776.900	103874.4	73038.08	22622.70	4432.720	1158.520	103.7900
Sum Sq. Dev.	11101.78	2.90E+08	2.29E+08	15855580	484410.7	29193.39	257.2233
Observations	41	41	41	41	41	41	41

**Table 2. Unit root tests result for the variables**

	Level		First difference	
	ADF	PP	ADF	PP
<i>lnINFR</i>	-3.4963 (0.0012)*	-3.3735 (0.0180)*	-	-
<i>lnOR</i>	-0.9135 (0.3674)	-1.7761 (0.3866)	-6.1733* (0.0000)	-6.1733* (0.0000)
<i>lnRE</i>	-2.1927 (0.0349)	-1.4976 (0.5246)	-8.4186* (0.0000)	-8.3645* (0.0000)
<i>lnCE</i>	-0.7165 (0.4783)	-0.8912 (0.7808)	-6.7822* (0.0000)	-6.7733* (0.0000)
<i>lnEXR</i>	-2.0981 (0.0426)	-2.2468 (0.1938)	-5.3787* (0.0000)	-5.3787* (0.0000)
<i>lnFDII</i>	-1.9502 (0.0586)	-1.6428 (0.4519)	-10.1309* (0.0000)	-10.1309* (0.0000)
<i>lnTIMP</i>	-0.7535 (0.8212)	-0.8309 (0.7993)	-4.9439* (0.0003)	-5.6162* (0.0000)

Note: ADF stands for Augmented Dickey-Fuller and PP stands for Phillips and Perron; p-value in parentheses, \* means a rejection of the null hypothesis of the unit root in the variables at the 5% level of significance; the optimal lag for ADF test is obtained by AIC, while that of PP test is obtained by bandwidths

Table 2 presents the unit root tests results for the individual series. The results show that only inflation (INFR) is stationary at levels, while the other series are stationary after first difference.

The F-statistic (3.975) of the bound test in Table 3 is greater than 5 per cent (5%) level of significance at I(1) which is 3.61. This implies that long-run relationship exists among the variables of interest.

**Table 3. Bounds test for Cointegration**

Test Statistic	Value	Significance	I(0)	I(1)
F-statistic	3.9570	10%	2.12	3.23
<i>k</i>	6	5%	2.45	3.61
		2.5%	2.75	3.99
		1%	3.15	4.43

Note: *k* is the lag length; Null hypothesis: No long-run relationships exist

After which we have verified the existence of long run relationship in the variables, we proceed by selecting the optimal lag length and the estimates of the ARDL model (Table 4). Using the Akaike Information Criterion (AIC), the lag lengths of the long run equilibrium model were obtained as  $ARDL(1,0,4,4,0,4,4)$ , with estimated parameters in Table 4 and its model in equation 7.

**Table 4. Long Run Coefficients**

Variables	Coefficients	Std. Error	t-statistic	P-value
$\ln INFR_{t-1}$	-0.209	0.2059	-1.0131	0.3295
$\ln OR_t$	-0.578	0.2581	-2.2372	0.0434
$\ln RE_t$	1.5385	0.6437	2.3903	0.0327
$\ln RE_{t-1}$	1.2239	0.4519	2.7084	0.0179
$\ln RE_{t-2}$	0.9799	0.4996	1.9613	0.0716
$\ln RE_{t-3}$	-0.479	0.4874	-0.9827	0.3437
$\ln RE_{t-4}$	-1.288	0.5227	-2.4647	0.0284
$\ln CE_t$	0.0505	0.3047	0.1657	0.8709
$\ln CE_{t-1}$	-0.844	0.3224	-2.618	0.0213
$\ln CE_{t-2}$	0.3559	0.3371	1.0555	0.3104
$\ln CE_{t-3}$	0.504	0.3532	1.4269	0.1772
$\ln CE_{t-4}$	-0.467	0.2958	-1.5779	0.1386
$\ln EXR_t$	-0.379	0.4449	-0.8511	0.4101
$\ln FDI_t$	0.1414	0.1941	0.7284	0.4793
$\ln FDI_{t-1}$	-0.437	0.1798	-2.4311	0.0303
$\ln FDI_{t-2}$	0.1451	0.213	0.6811	0.5077
$\ln FDI_{t-3}$	0.88	0.2205	3.9908	0.0015
$\ln FDI_{t-4}$	0.511	0.2193	2.3299	0.0366
$\ln TIMP_t$	-0.475	0.3714	-1.2776	0.2237
$\ln TIMP_{t-1}$	-1.112	0.4416	-2.5192	0.0256
$\ln TIMP_{t-2}$	-0.446	0.4582	-0.9732	0.3482
$\ln TIMP_{t-3}$	-0.033	0.4098	-0.0817	0.9361
$\ln TIMP_{t-4}$	-0.614	0.3046	-2.0146	0.0651
$c$	2.0457	0.4698	4.3547	0.0008

$$\begin{aligned}
 \ln INFR_t = & c + \beta_{1i} \ln INFR_{t-1} + \beta_{2i} \ln OR_t + \beta_{3i} \sum_{i=0}^4 \ln RE_{t-i} + \beta_{4i} \sum_{i=0}^4 \ln CE_{t-i} \\
 & + \beta_{5i} \ln EXR_t + \beta_{6i} \sum_{i=0}^4 \ln FDI_{t-i} + \beta_{7i} \sum_{i=0}^4 \ln TIMP_{t-i} \\
 & + \varepsilon_{ti}
 \end{aligned} \tag{7}$$

However, rearranging equation 7 with Ordinary Least Square (OLS), the following equation was obtained

$$\begin{aligned}
 \ln INFR_t = & -0.5775 \ln OR_t + 1.5385 \ln RE_t + 0.0505 \ln CE_t - 0.3787 \ln EXR_t \\
 & + 0.1414 \ln FDI_t - 0.4745 \ln TIMP_t \\
 & + \varepsilon_{ti}
 \end{aligned} \tag{8}$$

The results of the long run relationship model show that oil revenue has a negative significant impact on inflation, while recurrent expenditure and capital expenditure have positive impact on inflation, with the impact of recurrent expenditure significant. The results suggest that a 1 per cent (1%) reduction in oil revenue leads to 0.58% rise in inflation. It is also revealed that





1% increase in recurrent expenditure increases inflation by 1.54%, while a 1% increase in capital expenditure will lead to a 0.05% increase in inflation. Under the determinants of inflation, it is observed that 1% reduction in exchange rate will lead to 0.38% increase in inflation, and again, 1% increase in foreign direct investment inflow causes inflation to rise by 0.14%. Lastly, 1% increase in total imports of goods and services would cause inflation to reduce by 0.47%.

The ARDL short-run dynamics is obtained by developing an error correction model (ECM) shown in Table 5. The coefficients  $\Delta \ln OR_t$  is negatively significant, while  $\Delta \ln EXR_t$  and  $\Delta \ln TIMP_t$  are negative but not significant.  $\Delta \ln RE_t$ ,  $\Delta \ln CE_t$ , and  $\Delta \ln FDI_t$  have positive impacts. The short-run relationship among these variables is obtained using  $ARDL(0,1,3,3,1,3,3)$ . The  $ECT_{t-1}$  has a negative significant coefficient -0.209 and it suggests a moderate adjustment process. This implies that nearly 20.9% deviation in the long-run equilibrium of the previous year is adjusted next year.

**Table 5. Short Run Coefficients**

Variables	Coefficients	Std. Error	t-statistic	P-value
$\Delta \ln OR_t$	-0.578	0.2581	-2.2372	0.0434
$\Delta \ln RE_t$	1.5385	0.6437	2.3903	0.0327
$\Delta \ln RE_{t-1}$	-0.98	0.4996	-1.9613	0.0716
$\Delta \ln RE_{t-2}$	0.4789	0.4874	0.9827	0.3437
$\Delta \ln RE_{t-3}$	1.2884	0.5227	2.4647	0.0284
$\Delta \ln CE_t$	0.0505	0.3047	0.1657	0.8709
$\Delta \ln CE_{t-1}$	-0.356	0.3371	-1.0555	0.3104
$\Delta \ln CE_{t-2}$	-0.504	0.3532	-1.4269	0.1772
$\Delta \ln CE_{t-3}$	0.4667	0.2958	1.5779	0.1386
$\Delta \ln EXR_t$	-0.379	0.4449	-0.8511	0.4101
$\Delta \ln FDI_t$	0.1414	0.1941	0.7284	0.4793
$\Delta \ln FDI_{t-1}$	-0.145	0.213	-0.6811	0.5077
$\Delta \ln FDI_{t-2}$	-0.88	0.2205	-3.9908	0.0015
$\Delta \ln FDI_{t-3}$	-0.511	0.2193	-2.3299	0.0366
$\Delta \ln TIMP_t$	-0.475	0.3714	-1.2776	0.2237
$\Delta \ln TIMP_{t-1}$	0.4459	0.4582	0.9732	0.3482
$\Delta \ln TIMP_{t-2}$	0.0335	0.4098	0.0817	0.9361
$\Delta \ln TIMP_{t-3}$	0.6137	0.3046	2.0146	0.0651
$ECT_{t-1}$	-0.209	0.2059	-5.8704	0.0001

**Table 6. ARDL model diagnostic test**

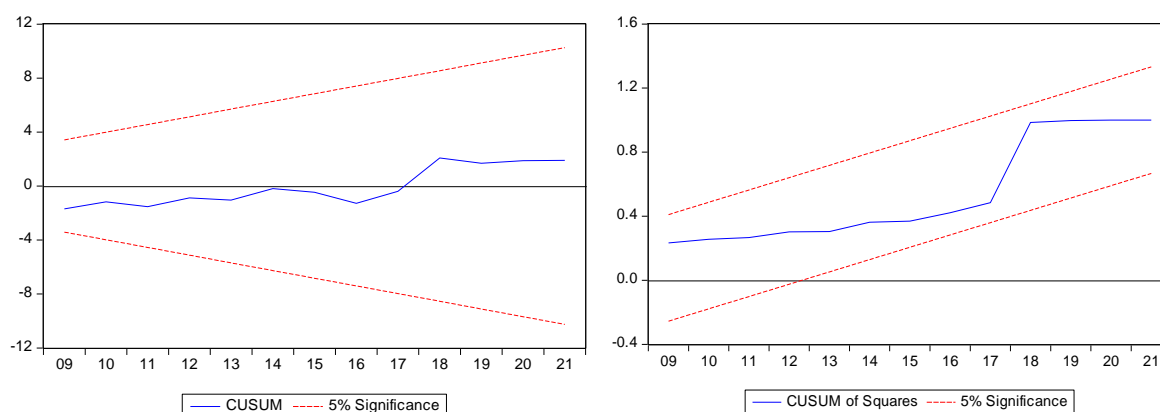
<b>Diagnostic Test</b>	
R-squared	0.8817
Adjusted R-squared	0.6723
Durbin Watson (DW) statistic	2.3416
F-statistic	4.2112 (0.0049)
Residual sum square (RSS)	0.3904
Standard error of regression (SE)	0.1733
Jarque-Bera normality test (JB)	0.8068 (0.6680)
Breusch-Godfrey (BG) test for serial correlation	0.6068 (0.4511)
Breusch-Pagan-Godfrey for heteroscedasticity (BPG)	1.5165 (0.2199)
Ramsey's reset test for linearity	2.5348 (0.1243)

Note: p-value in parentheses

The value of the R-squared (0.8817) for the model in Table 6 is high, indicating that the overall goodness-of-fit of the model is good and that the variation in inflation could be explained with changes in fiscal policy (oil revenue, recurrent expenditure, and capital expenditure) and the determinants of inflation (exchange rate, foreign direct investment inflow, and total imports). In Table 6, the F-statistic = 4.2112 (p-value = 0.0049) which measures the joint significance of the predictor variables in the model is statistically significant at 1 per cent (1%) level of significance.

The value of Jarque-Bera tests indicates that the model residuals are normally distributed (Table 6). Breusch-Godfrey test for serial correlation suggests that there is absence of serial correlation in the predictor variables. The Breusch-Pagan-Godfrey test for homoscedasticity result in Table 6 shows that the model residuals are constant (homoscedastic), furthermore, Ramsey Reset test which is used to test the model for linearity suggests that the model is linear.

Both the cumulative sum of recursive residuals (CUSUM) and cumulative sum of squares (CUSUMSQ) tests were used to check the long- and short-run coefficient stability (Figure 2 and 3) as suggested by Brown et al. (1975) and Lawal et al. (2018). For the model parameters to be stable, the CUSUM and CUSUMSQ tests outputs should lie within the two critical bounds at 5% level. The model diagnostic and stability tests output in Figure 2 suggest that all the long- and short-run coefficients lie within the ARDL bounds critical value at 5 per cent significance. This however implies that the estimated model is stable during the period in Nigeria, and it is suitable for long run decisions.



**Figure 2. Autoregressive distributed lag (ARDL) model stability test**

## CONCLUSION AND POLICY IMPLICATIONS

This study examined the nexus between fiscal policy and inflation in Nigeria for the period 1981-2021. The empirical findings show evidence of long-run cointegration nexus of fiscal policy and inflation using the ARDL bounds testing approach. ARDL long- and short-run coefficient stability in this study were supported by Cumulative sum and cumulative sum of squares tests. The findings show that in both long- and short-run, a reduction in oil revenue leads to a significant rise in inflation, while a rise in recurrent expenditure and capital expenditure leads to increase in inflation. The study recommends that the government should review her fiscal policy to adjust recurrent and capital expenditure, and to reduce import by encouraging consumption of local products

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