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The Impact Of Value Added Tax, Petroleum Profit Tax And Government Spending On Non-Oil Exports

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ABSTRACTS

This study examined the impact of fiscal policy on non-oil exports in the Nigerian economy. Annual time series data were used from 1980 to 2021. The cointegration link was verified using the autoregressive and distributed lag (ARDL) bound test. The results show that three elements of fiscal policy the value added tax, the petroleum profit tax, and government spending have a considerable long-term impact on non-oil export. The study also found that exports of goods other than oil were negatively and significantly impacted by domestic debt. Furthermore, exports other than oil are determined to have little economic impact. As a result, the study recommends that the government concentrate its efforts on diversifying the economy and government revenue, as doing so will make borrowing loans from other countries easier. The government must diversify its revenue sources away from oil and capitalize on the non-oil sector's ability to create small and medium-sized jobs.

INTRODUCTION

The Nigerian economy has faced numerous challenges over the years. These issues include a lack of synergy between macroeconomic planning and fiscal policies (Akpoghelie, 2022; Ugoani, 2022) ineffective and incorrect policies. There are unproductive government spending, insufficient sectorial connections, and other socioeconomic ills are the enemies of rapid economic growth and progress (Ogbole, Amadi, & Essi, 2011). Nigeria's failure to effectively manage her vast human and material wealth is undeniably one of her greatest challenges today. Despite numerous and sometimes changing macroeconomic policies, Nigeria has not been able to fully realize its potential for rapid economic development. This is largely due to a lack of economic diversification. To achieve an improved balance of payments position, balanced industrial development, high employment levels, higher productivity, equitable income

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distribution, high revenue sources, price stability, and economic growth, various macroeconomic strategies have been required. Macroeconomic theories advocate combining the government's monetary and fiscal policies.

It encompasses all economic policy frameworks aimed at constructing a strong, stable, and dynamic economy (Ogar, Arikpo, & Suleiman, 2019). Fiscal policy is essential for stabilization and sporadic development in all societies, but especially in less developed countries (LDCs) (Babalola, 2015). Fiscal policy aims to foster economic and social progress by maintaining a sense of balance between revenue, expenditure, and borrowing that is consistent with sustainable growth. Fiscal measures must be implemented to reduce short-term swings in output and employment. It has gained acceptance in both developed and developing countries as a powerful tool for addressing macroeconomic issues such as high productivity, dispersed unemployment, a lack of national savings, unsustainable budget deficits, and high levels of public debt. Fiscal policy promotes economic development and growth in a variety of ways. The macroeconomic the effects of the fiscal deficit on growth and microeconomic are influence on efficiency of resource use. In practice, fiscal policy is used to steer the economy toward a variety of economic transformations such as income redistribution, price stability, unemployment reduction, and economic expansion and growth. Economic diversification, which necessitates active participation in a wide range of industries as well as strong regional integration, is better able to generate robust growth and has the potential to increase Nigeria's resilience as well as help the country achieve and sustain long-run economic growth and development.

Nigeria is home to numerous renewable and nonrenewable resources, some of which have yet to be fully exploited. Solar energy, which is possibly the most abundant of the underutilized renewable resources, will most likely remain untapped for some time, while massive amounts of natural gas produced from crude oil have also not yet been fully utilized. (Akpan, 2015). Nigeria was a prominent exporter of agricultural and other natural resources before crude oil was discovered there in 1956 due to its agrarian economy, which exported cash products like palm oil, cocoa, rubber, timber, and ground nuts. With 19 million cattle, Nigeria also had the most in Africa. Nigeria is no longer a major supplier of palm oil, rubber, or groundnuts (also known as peanuts). Despite the use of mostly obsolete varieties and older trees, cocoa production has increased from about 180,000 tons per year to 350,000 tons (Adebayo, Oyawole, Sanusi, & Afolami, 2022).

LITERATURE REVIEW

In recent studies Aremo & Abiodun (2020); Ajmair, Khan, & Bashir (2022) investigates how fiscal policy affects economic expansion in Asian economies. In contrast to distortionary taxation, budget balance, and defense spending, which were found to have a significant negative relationship with real per capita economic growth, spending on health and education, overall spending, and the sum of other fiscal variables were found to have a positive relationship with economic growth. Kukk (2007) this study used a panel data range between 1971 and 1980, covered 52 countries was analyzed to investigate the long- and short-term effects of fiscal policy on economic growth. Because fiscal policy cannot have a significant impact on the economy in the short-run, even if its impact is confirmed in the long run, the study's findings show that Keynesian notions are incorrect. He came to the conclusion that fiscal expansion does not benefit the economy. Komain & Brahmasrene (2007) investigated the connection between Thai government spending and economic growth using the Granger causality test. Their research found a one-way relationship because the spending-growth causal chain. However, the results showed that government spending significantly boosts economic growth. Okemini & Uranta (2008) the VAR methodology was used to investigate the dynamic effects of fiscal policy on macroeconomic variables. The study's findings indicate that increases in government spending lead to significant and long-term improvements in consumption and employment. Ogbole (2010)

carried out an empirical investigation into the relationship between fiscal policy and economic growth in developing Asian countries. When compared to advanced economies, the study discovered that the region's overall level of taxation and government spending had a significant impact on economic growth. Property taxes have a more moderate effect on economic growth than education spending.

McGrath (2013) used a data of 107 countries from 1970 to 1985 to examine the impact of fiscal policy on economic progress. The study's findings show that increasing taxes and spending to achieve a balanced budget reduces the rate of output growth. The study examined the causal relationships between Nigeria's money supply, fiscal deficits, exports, and economic development from 1970 to 2010 using error correction model. Nathan (2012) investigated how fiscal policy affected the Nigerian economy, and his findings show a strong relationship between the variables and economic growth. According to the report, fiscal policy is an important tool for ensuring Nigeria's economic development. Evans et al. (2018) In this study, which attempted to evaluate the relationship between the amount of public expenditure and growth, they identified situations in which a change in the composition of expenditures results in a higher steady-state growth rate of the economy, spending by the government on health, transportation, and communications. According to Abubakar (2016) has a positive impact on economic growth, whereas spending on capital projects, ongoing expenses, and education has a negative impact. Anthanasios (2013) investigated the relationship between Greece's fiscal policies, growth, and unemployment using the SVAR methodology.

ALex & Ebieri (2014) used the ARDL methodology to examine how fiscal policy affected Nigeria's economic growth. The study discovered a long-run equilibrium relationship between fiscal policy and economic growth in Nigeria. Non-oil taxes and total government debt had no effect on real GDP, but capital and recurrent government spending had a strong positive correlation with economic growth. Capital spending was the only variable found to have a short-term relationship with economic growth. Ayobami & Olalekan (2020) used dynamic panel data examined the impact of fiscal policies on economic growth in MENA countries. The study's findings indicated a long-term relationship between fiscal policy and economic expansion. The GDP-budgetary-revenue relationship revealed a positive causal relationship between economic growth and tax receipts. Separating the effects of taxation objectively proved difficult. Higher government spending does not reduce consumer spending, but rather increases private investment, which accelerates economic expansion.

Abdulrauuf (2015) examined the short- and long-term effects of fiscal policy on Nigeria's economic development using annual data series from 1981 to 2013 and the Vector Error Correction Model (VECM). According to his findings, capital spending has only a short-term positive impact on economic growth, whereas government investment and recurring spending have both short- and long-term benefits. It was demonstrated that tax revenue had a negative short- and long-term impact on Nigeria's economic development. Obayori (2016) used an error correction model to investigate the impact of fiscal policies on unemployment in Nigeria. The study's findings revealed that government spending on both capital and ongoing costs had a negative impact on Nigerian unemployment. Some studies ALex & Ebieri (2014); Abdulrauuf (2015); Akpan (2015) found a positive relationship between public spending and output growth, whereas others found a negative relationship between some aspects of public spending and output growth.

RESEARCH METHODOLOGY

A variable's order of integration determines how many times it must be differentiated before it becomes stable. Its goal is to determine whether or not the variable has a unit root. Specifically,

whether the variable is stationary or not, there is no unit root, according to the null hypothesis. This test employs the Augmented Dickey Fuller (ADF) estimation method. We accept the null hypothesis if the ADF test statistic is greater than the 1%, 5%, or 10% critical values. Because the variable is non-stationary, we reject the null hypothesis and proceed to the first difference. If the variable does not become stationary after the first difference, we differ once more. The variables, however, become stationary after the initial difference. Following the series of integration tests, the next step is to test for co-integration. This test seeks to uncover any long-term relationships between the model's variables. (Banerjee, Duflo, Glennerster, & Kinnan, 2015). The relationship between FDI and FD is determined in this study by using the Autoregressive Distributed Lag (ARDL) bounds test approach to cointegration proposed by Pesaran, Shin, and Smith (2001). The ARDL approach has several statistical advantages over previous cointegration strategies. Unlike other co-integration techniques, which require all variables to be integrated in the same order, the ARDL test procedure produces valid results whether the variables are I(0), I(1), or mutually co-integrated. It also produces extremely accurate and consistent estimates in both small and large sample sizes. (Pesaran, Shin, & Smith, 2001). Because all of the sequences of stationaries are found between I(0) or I(1), this technique becomes relevant to our study.

Model specification

To achieve the study's goal, a simple model was created to capture the variables in the study as given in equation 1.

$$RGDP = f(VAT, PPT, GE, DD, NE) \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Transforming the function in to econometric model, we have the following:

$$RGDP_t = \beta_0 + \beta_1 VAT_t t + \beta_2 PPT_t + \beta_3 GE_t + \beta_4 DD_t + \beta_5 NE_t + \epsilon_t \ldots\ldots\ldots (2)$$

If we transform it in to a log form, we have;

$$lnRGDP_t = \beta_0 + \beta_1 lnVAT_t + \beta_2 lnPPT_t + \beta_3 lnGE_t + \beta_4 lnDD_t + \beta_5 lnNE_t + \epsilon_t \ldots\ldots (3)$$

$RGDP$ = the dependent variable is the proxy of economic growth. VAT = Value added tax (VAT). PPT = Petroleum profit tax. GE = Government expenditure. DD = Domestic debt. NE = Non-oil exports. The coefficients all independent variables are expected to be positive (β1> 0), (β2 > 0), (β3> 0), (β4> 0) and (β5 > 0).

Where Δ is first difference operator and 1 is optimal lag length. To test the long-run cointegration relationship among the variables, extracted from the equation 3 above, the ARDL unrestricted error correction model, (ECM) is specified as follows:

$$\Delta RGDP_t = \phi 0 + \sum_{i=1}^{1} P\, i\, \Delta RGDP_{t-1} + \sum_{i=0}^{1} \delta\ \Delta VAT_{t-1} + \sum_{i=0}^{1} \vartheta\, i \Delta PPT_{t-1} + \sum_{i=0}^{1} x\, i \Delta GE_{t-1} + \sum_{i=0}^{1} x\, i \Delta DD_{t-1} + \sum_{i=0}^{1} x\, i \Delta NE_{t-1} + \alpha_1 RGDP_{t-1} + \alpha_2 VAT_{t-1} + \alpha_3 PPT_{t-1} + \alpha_4 GE_{t-1} + \alpha_3 DD_{t-1} + \alpha_4 NE_{t-1} + \xi_t \ldots\ldots\ldots (4)$$

The F test will be used to compare the alternative, which has a non-standard distribution depending on whether the model's input variables are I(0), I(1), or mixed; the number of regressors; and whether the model contains an intercept and/or trend. Because of the study's small sample size (between 30 and 80), the critical values proposed by Narayan and Narayan (2005) will be used. The test employs a different set of asymptotic critical value limits depending on whether the variables are I(0), I(1), or mixed. The two sets of critical values are I(0), also known as the lower bound, and I(1), also known as the upper bound. When the F statistics are greater than the upper bound, we conclude that cointegration exists and reject the null hypothesis. If they are less than the lower bound, the null hypothesis cannot be ruled out, and if they are between the two bounds, no conclusion can be drawn (inconclusive). However, if we find evidence of a long-run link between the variables, the following long-run equation 6 and short-run equation 7 models will be estimated concurrently:
Once a cointegration connection was established, the long-run model would be estimated as follows:

$$RGDP_t = \phi_1 + \sum_{i=1}^{l} L\,1_i RGDP_{t-1} + \sum_{i=0}^{l} \delta\,1_i VAT_{t-1} + \sum_{i=0}^{l} \vartheta\,1_i PPT_{t-1} + \sum_{i=0}^{l} x\,1_i\, GE_{t-1} + \sum_{i=0}^{l} \vartheta\,1_i DD_{t-1} + \sum_{i=0}^{l} x\,1_i\, NE_{t-1} + \xi_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (5)$$

The short-run model of the error correction specification would also be estimated to determine the short-run dynamic behavior of the model's variables.

$$\Delta RGDP_t = \phi_1 + \sum_{i=1}^{l} L\,2_i \Delta RGDP_{t-1} + \sum_{i=0}^{l} \delta\,2_i \Delta VAT_{t-1} + \sum_{i=0}^{l} \vartheta\,2_i \Delta PPT_{t-1} + \sum_{i=0}^{l} x\,2_i \Delta GE_{t-1} + \sum_{i=0}^{l} \vartheta\,2_i \Delta DD_{t-1} + \sum_{i=0}^{l} x\,2_i \Delta NE_{t-1} \ldots\ldots\ldots\ldots\ldots (6)$$

$$ECM = RGDP_t - \phi_1 - \sum_{i=1}^{l} L\,1_i RGDP_{t-1} - \sum_{i=0}^{l} \delta\,1_i VAT_{t-1} - \sum_{i=0}^{l} \vartheta\,1_i PPT_{t-1} - \sum_{i=0}^{l} x\,1_i GE_{t-1} - \sum_{i=0}^{l} \vartheta\,1_i DD_{t-1} - \sum_{i=0}^{l} x\,1_i NE_{t-1} \ldots\ldots\ldots\ldots\ldots (7)$$

The coefficient of ECM in Equation 7 represents the rate at which the variables are changed as equilibrium is near. The correlation between the variables over time is also revealed by the coefficient. Following the estimation process, diagnostic tests will be run to determine the precision and viability of the estimations.

RESULT AND DISCUSSION

Prior to estimation, the data's time series properties were examined using ADF and PP test statistics. Even though it is not necessary to examine the order of the variables' integration when using ARDL, the unit root test was performed to ensure that no variables exceeded I(1) and to ensure that the approach was applied correctly. This is because Pesaran et al. (2001) developed the ARDL approach under the assumption that all variables are either purely I(0), I(1), or mixed. In any case, the presence of I(2) variables would render the method invalid. As a result, these tests were carried out as part of this investigation. Before beginning the estimation, the time series properties of the data were verified using the ADF and PP test statistics. Even though it is not necessary to analyze the order of the variables' integration when using ARDL, the unit root test was performed in the study to ensure that no variable exceeded I(1) and to assess if the methodology was used effectively. This is because Pesaran et al. (2001) built the ARDL technique on the assumption that every variable is either purely I(0), I(1), or mixed. In any case, the technique would be flawed because I(2) variables exist. As a result, these tests were carried out as part of this investigation.

Table 1 shows the results of the ADF and PP tests, which show that only the non-oil export LNE is stationary at 1% using the ADF and PP tests with constant with trend, whereas all the other variables are stationary at the first difference using the ADF tests with both constant and trend behavior, implying that the variables may be related over time. The Augmented Dickey-Fuller (ADF) and Philip Perron (PP) unit root tests were performed on each of the series included in the analysis. Table 1 shows the results of the unit root tests for the level and first difference for each series, and Table 2 summarizes those results.

Table 1 Unit root test results

Variable		Augmented Dickey Fuller (ADF)		Philip Perron (PP)	
		Constant Without Trend	Constant With Trend	Constant Without Trend	Constant With Trend
GDP	I(0)	-0.6909	-2.2683	0.7725	-3.9713**
	I(1)	-4.1350***	-3.5496**	-4.2311***	-3.9315**
VAT	I(0)	-1.0972	-2.1981	-1.5789	-2.1981
	I(1)	-7.4581***	-5.8134***	-7.9763***	-10.6417***
PPT	I(0)	-0.8162	-1.6303	-0.6138	-2.1169
	I(1)	-4.9839***	-4.9473***	-6.3061***	-6.2370***
GE	I(0)	0.0530	-2.1903	-5.0322***	-2.1608
	I(1)	-4.4163***	-5.0322***	-4.4885***	-5.0392***
DD	I(0)	-2.3150	-2.3449	-2.4321	-2.2657
	I(1)	-4.7049***	-4.6147***	-4.6292***	-4.5284***
NE	I(0)	-0.6731	-10.3894***	-0.6731	-10.3894***
	I(1)	-15.3948***	-14.8318***	-15.3948***	-14.8318***

(Note: i) The figure in parenthesis (…) represents the test of variable stationarity. Asterisks (***), represent critical values at 1%, level of significance, Asterisks (**), represent critical values at 5%, level of significance respectively. ii) the lags were automatically selected.

Following the stationarity test, the study used the data to determine the ideal lag. According to the results in Table 2, this model works best with a maximum of four delays. The ARDL bounds test was used to determine whether there is proof of cointegration between the variables. Table 3 shows the results of the bound test.

Table 2 Optimal lag selection criteria

Lag	Log L	LR	FPE	AIC	SC	HQ
0	-55.3507	NA	1.346	3.5057	3.7723	3.5977
1	129.4079	295.6138	2.8210	-4.9947	-3.1283	-4.3504
2	160.5579	39.1595	4.5010	-4.7175	-1.2513	-3.5210
3	210.1330	45.3260	3.6310	-5.4933	-0.4273	-3.7445
4	321.6088	63.7004*	1.9611*	-9.8062*	-3.1404*	-7.5051*

Note: Akaike Information Criterion was used to detect the optimal lags 4

Table 3 shows that the computed F-statistic of 13.7217 is greater than the upper bound critical value of 4.68 at both the 1% and all levels of significance. The null hypothesis of no cointegration between GDP,VAT,PPT,GE,DD and NE can be confidently rejected because this demonstrates a significant cointegration link between the variables; in other words, the variables have a long-run equilibrating relationship.

Table 3 ARDL bounds test result

				Bounds critical values Constant (Level)	
Model	F-statistics	Lag	Level of significance	I(0)	I(1)
$\boldsymbol{GDP = f(VAT, PPT, GE, DD, NE)}$	13.7217	4			
			10%	2.26	3.35
			5%	2.62	3.79
			2.5%	3.96	4.18
			1%	3.41	4.68

Note: The critical values in E-views 9 are taken from Table Case III (E-views 9). The bolding indicates the degree to which the F-statistic exceeds the upper bound critical value.

The long-run model was estimated, and the results were reported, as well as the cointegration relationship between the variables. Non-Oil Export (NE) has a long-run negative and statistically insignificant impact on Nigeria's economic growth, according to Table 4; the T-statistic and probability values are -2.5001 and 0.0148, respectively. On the other hand, it was discovered during the course of the study that government spending had a positive and significant impact on Nigerian economic growth. A 1% increase in government spending in Nigeria is likely to boost economic development by 0.0008. Domestic debt is statistically significant despite having a negative coefficient of -0.1624 and a probability value of 0.0000. This means that for every 1% increase in the national debt, economic growth will fall by -0.1642. In other words, if the private sector borrows money from the government, GDP will fall. As a result, economic growth will be slower. In Nigeria, a 1% increase in government spending boosts economic growth; the probability of this happening is 0.0008. Domestic debt is statistically significant despite having a negative coefficient of -0.1624 and a probability value of 0.0000. This implies that for every 1% increase in the domestic debt, economic growth will fall by -0.1642. For example, if the private sector borrows money from the government, output will fall, affecting GDP as well.

Table 4 ARDL long-run result

Dependent Variable, $\boldsymbol{RGDP}$				
Regressors	Coefficient	Std. Error	t-Statistic	Prob.
$InVAT$	0.4477***	0.7770	2.5762	0.0054
$InPPT$	0.2974***	0.1580	2.0018	0.0086
$InGE$	0.8056***	0.9761	3.8252	0.0008

$InDD$	-0.1624***	0.1311	4.2386	0.0000
$lnNE$	0.7301**	0.4593	-2.5001	0.0148
C	0.1380***	0.4044	3.7339	0.0007
R-squared = 0.988573			F-statistics = 18.53826	
DW statistics = 2.315585			Prob(F-statistics) = (0.000747)	

The findings is clear, however, because it is expected that as non-oil exports increase, other economic sectors will expand to accommodate more labor and create a large number of jobs, ultimately increasing the economy's productive capacity and fueling economic growth and development. Over the course of the study, additional findings show a positive and statistically significant relationship between the petroleum profit tax and the value-added tax in the Nigerian economy. At 5%, the coefficients for value-added tax and PPT are 0.4477 and 0.2974, respectively. The explanatory factors explained 95% of the proportion of the dependent variable, according to the model's R-squared of 0.9885, while the error term in the model accounted for only 5% of the variation.

According to the Durbin Watson statistics of 2.3155, the model fits within the range of 1.5 to 2.5, indicating that it is well suited. The lack of first order serial correlation, as well as the fact that the DW statistics 2.3155 is greater than the R-squared 0.9885, are further arguments in favor of the model. The short-run model is estimated after the long-run coefficient is determined, and the result is displayed. According to the data in Table 5, the Value Added Tax (VAT) has a significant and negative effect on Nigeria's economic growth at the 5% level of significance. The VAT coefficient is -0.060698 and the probability value is 0.0401. This demonstrates that the value added tax has a short-term diminishing relationship with economic growth. However, at a level of significance of 5%, the lag value of VAT suggests a positive and significant impact on economic growth, with a coefficient of 0.0801 and a probability value of 0.0296. To be more specific, a 1% increase in VAT results in a -0.0606 reduction in economic growth. This implies that a 1% increase in VAT will result in a 0.081% increase in economic growth in Nigeria. It was determined at a 5% level of significance that there is a significant positive correlation between Nigeria's economic growth and the petroleum profit tax. The PPT coefficient is 0.0524, and the probability value is 0.0338. For every 1% increase in non-oil exports per unit, short-run economic growth improves by 0.052492.

Table 5 ARDL short-run and error correction results

Dependent Variable, RGDP

Regressors	Coefficients	Std. Error	t-Statistic	Prob.
$\Delta RGDP$	-0.0958	0.1383	-0.6927	0.5144
ΔVAT	-0.0606**	0.0232	-2.6110	0.0401
ΔPPT	0.0524**	0.0191	2.7392	0.0338
ΔGE	0.0004	0.0414	0.0102	0.9921
ΔDD	-0.0733**	0.0253	-2.8924	0.0276
ΔNE	-0.0274**	0.0306	-0.8942	0.0405
$ECTt-1$	-0.2213***	0.1647	-3.7424	0.0008

Source: Researcher's computation (2021)

Domestic debt and non-oil exports were also found to be negatively correlated with economic growth, despite being statistically insignificant. Domestic debt (DD) and non-oil exports (NE) have coefficients of -0.0274 and 0.4055, respectively. The lag value of government spending, on the other hand, indicates a negligible positive correlation with economic expansion. 1% increase in GE, for example, causes a 0.0004 increase in Nigeria's economic growth. The error correction term (ECT) is significant, negative, and has an absolute value less than one. The ECT coefficient

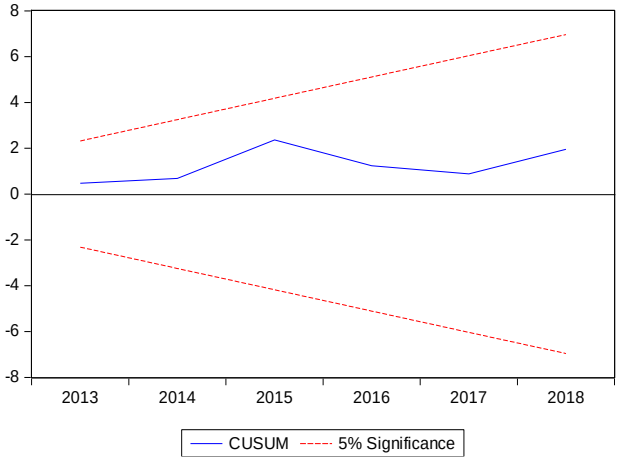
is -0.2213, and the probability value is 0.008. This demonstrates that the long-run equilibrium was reached with a yearly adjustment rate of 22% and validates the previous long-run relationship between the series.

Because only 22% of the explained and explanatory variables' short-run disequilibrium will eventually converge to equilibrium, the rate of correction is moderate. Based on the results of the diagnostic tests in Table 6, the Breusch-Godfrey LM test has a probability value of 0.2874, which is greater than 5% and indicates that there is no serial correlation in the model. The probability value of 0.9963 for the Breusch-Pagan Godfrey test for heteroskedasticity demonstrates the model's homoscedasticity. The probability value for the Jarque-Bera (normality) test is 0.724497, which is also extremely small but indicates that the data in the series are normally distributed because it is greater than 5% (0.72>0.05). According to the Ramsey RESET stability test, the probability value of 0.9377 is small, indicating that the model is properly defined. This means that the model is free of serial correlation, heteroskedasticity, normality, and functional form problems. As a result, this model may produce accurate results.

Table 6 Diagnostic test result

Test Statistics	F(Prob)	Probability
Autocorrelation	F(4,2) =2.708803	0.2874
Hetroskedasticity	F(28,6) = 0.235380	0.9963
Normality	0.644555	0.7244
Stability	F(1,5) = 0.006744	0.9377

The model's stability during the examined periods was tested using the cumulative sum (CUSUM) and cumulative sum of squares (CUSUMSQ) tests, according to Chindo et al (2018). For a model to be stable over the sampled period, the residuals line must be contained by the straight lines of the crucial limits at a 5% significance level. Figures 1 and 2 are the results, which show that the residual is within the critical bounds at a 5% level of significance. These results indicate that the model is reasonably stable. Straight lines represent critical bounds at a 5% significance level.



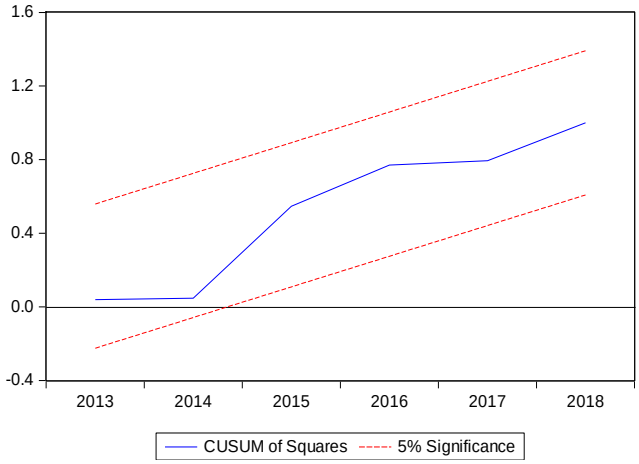


Figure 1 and 2: plot of cumulative sum and cumulative sum of squares recursive residual.

SUMMARY AND RECOMMENDATION

This study examined how fiscal policy and non-oil exports influenced economic development from 1980 to 2021. To achieve the stated goals, the value added tax (VAT), petroleum profit tax (PPT), government spending (GE), domestic debt (DD), and non-oil export (NE) were modeled against gross domestic product (GDP). The Augmented Dickey Fuller (ADF) test was used to find the unit root among the variables. The ADF test revealed that GDP, VAT, PPT, GE, and DD are stationary at first difference I(1), whereas NE is stationary at level I at 1% significance (0). The variables under consideration were cointegration tested using the optimal lag selection test and the ARDL bounds test, and it was discovered that had a long-run association. Across the study period, the value-added tax, petroleum profit tax, and government spending all showed a significant positive correlation with long-run ARDL outcomes. Domestic debt (DD) had a statistically significant negative impact on Nigerian economic growth, while non-oil export (NE) had a statistically insignificant positive impact. The dynamic nature of the interaction between the dependent and independent variables was also determined by the short-run model estimation. Petroleum profit tax (PPT) and government spending (GE) have insignificant positive effects on economic growth, while value-added tax (VAT), domestic debt (DD), and non-oil export (NE) have negligible negative effects. According to the Error Correction Mechanism, 22% of the short-run disequilibrium between the explained and explanatory variables will eventually return to equilibrium. According to the coefficient of determination, the explanatory factors explained 98% of the variation in the dependent variable, while the error term in the model contributed only 2% of the variation. Given that the model falls between 1.5 and 2.5, the Durbin Watson statistics of 2.3155 indicate that it is well suited. According to the report, non-oil exports have a minor and insignificant impact on Nigeria's economic growth. Domestic debt has both positive and negative effects on economic growth. While government spending, VAT, and the tax on petroleum earnings all had a positive and significant impact.

RECOMMENDATION

The government should develop relevant economic policies aimed at reinventing itself in the non-oil sector in order to broaden the country's revenue base and provide an alternative source of foreign cash. The economy's over-reliance on oil revenues, which has recently proven to be unstable, should serve as a wake-up call to policymakers to the need to diversify Nigeria's

revenue sources. Non-oil industry should be given equal attention as the oil sector because it can help the country achieve independence by providing a reliable alternative source of income. Non-oil industry should be given equal attention as the oil sector because it can help the country achieve independence by providing a reliable alternative source of income. Policymakers should take advantage of the non-oil industry's potential to increase employment on a small and medium scale and lower the nation's high unemployment rate. They should also implement policies that encourage existing businesses in the sector to grow. According to the data, debt management guidelines have to be properly executed to reduce the negative effect of debt servicing to the economy. Diversifying the economy and increasing government revenue should be the priority, as this will reduce the need for borrowing from outside sources to fund public initiatives. To strengthen the Naira, authorities should implement policies that encourage foreign investment while decreasing demand for foreign goods. Higher export revenue, driven by an export-led growth strategy, is the best long-run alternative to external debt. Human capital investments should also be used to fund development efforts in Nigeria.

REFERENCES

Abdulrauuf, I. B. (2015). Fiscal Policy and Economic Development in Nigeria. *Journal of Economics and Sustainable Development*, *6*(7), 150–161.

Abubakar, A. B. (2016). Dynamic effects of fiscal policy on output and unemployment in Nigeria: An econometric investigation. *CBN Journal of Applied Statistics*, *7*(2), 101–122.

Adebayo, S. T., Oyawole, F. P., Sanusi, R. A., & Afolami, C. A. (2022). Technology adoption among cocoa farmers in Nigeria: what drives farmers' decisions? *Forests, Trees and Livelihoods*, *31*(1), 1–12.

Ajmair, M. G., Khan, A., & Bashir, U. (2022). Fiscal policy and sectoral growth in Pakistan. *Pakistan Journal of Social Research*, *4*(2), 208–221.

Akpan, U. (2015). Technology options for increasing electricity access in areas with low electricity access rate in Nigeria. *Socio-Economic Planning Sciences*, *51*, 1–12.

Akpoghelie, E. O. (2022). The impact of monetary and fiscal policies on the performance of the industrial sector in Nigeria: A bounds test approach sciences. *Global Journal of Arts, Humanities and Social*, *10*(4), 1–22.

ALex, E. O., & Ebieri, J. (2014). Empirical analysis of the impact of fiscal policy on economic growth of Nigeria. *International Journal of Economics and Finance*, *6*(6), 1–14.

Anthanasios, O. T. (2013). The unemployment effects of fiscal policy: Recent evidence from Greece. *Iza Journal of European Labour Studies*, *2*(11), 234–253.

Aremo, A. G., & Abiodun, S. T. (2020). Causal nexus among fiscal policy, economic growth and income inequality in Sub-Saharan African Countries (1995-2016). *African Journal of Economic Review*, *8*(1), 1–25.

Ayobami, O. T., & Olalekan, Y. D. (2020). Fiscal-monetary policy interactions and macroeconomic performance in a small open economy: a GMM approach. *Growth*, *7*(1), 1–12.

Babalola, A. I. (2015). Fiscal policy and economic development in Nigeria. *Journal of Economics and Sustainable Development*, *6*(7), 150–159.

Banerjee, A., Duflo, E., Glennerster, R., & Kinnan, C. (2015). The miracle of microfinance? Evidence from a randomized evaluation. *American Economic Journal: Applied Economics*, *7*(1), 22–53.

Evans, O., Adeniji, S., Nwaogwugwu, I., Kelikume, I., Dakare, O., & Oke, O. (2018). The relative effect of monetary and fiscal policy on economic development in Africa: a GMM approach to the St. Louis equation. *Business and Economic Quarterly*, (2October), 3–23.

Komain, J., & Brahmasrene, T. (2007). The relationship between expenditure and economic growth in Thailand. *Journal of Economics and Education Research*, *8*(2).

Kukk, K. (2007). Fiscal policy effects on economic growth: short run vs long run. *Tallinn University of Technology Working Paper, 167*, 77–96.

McGrath, M. (2013). Fiscal sustainability case investigation: City of Santa Ana. *National Civic Review*, *102*(1), 7–12.

Nathan, P. A. (2012). The impact of fiscal policy on the Nigerian economy. *International Review of Social Sciences and Humanities*, *4*(1), 142–150.

Obayori, J. B. (2016). Fiscal policy and unemployment in Nigeria. *The International Journal of Social Sciences and Humanities Invention*, *3*(2), 1887–1891.

Ogar, A., Arikpo, O. F., & Suleiman, L. G. (2019). Fiscal and macroeconomic policies dynamics in Nigeria. *Global Journal of Social Sciences*, *18*, 33–51.

Ogbole, F. O. (2010). Fiscal Policy and Macroeconomic Performance in Nigeria. *Unpublished PhD Thesis*, Department of Banking and Finance, Rivers State Un.

Ogbole, O. F., Amadi, S. N., & Essi, I. D. (2011). Fiscal policy and economic growth in Nigeria: a granger causality analysis. *American Journal of Social and Management Sciences*, *2*(4), 356–359.

Okemini, E. B., & Uranta, D. T. (2008). Poverty & criminality in the Niger-Delta Region: A critical analysis. *Integrated Social Management Journal*, *1*(2), 1–8.

Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, *16*(3), 289–326. https://doi.org/10.1002/jae.616

Ugoani, J. N. N. (2022). Dynamics of fiscal policy and national development in Nigeria. *Journal of Management and Economic Studies*, *4*(4), 400–409.