VIKRAMA RESEARCH INSTITUTE
JEBD
P-ISSN - 2985-5365 (PRINT)
E-ISSN - 2986-2132 (ONLINE)
JOURNAL OF ENTREPRENEURIAL AND BUSINESS DIVERSITY
PUBLISHING KSI
Indexed By : GARUDA Google doi Crossref INDEX COPERNICUS ROAD ISJD Indonesia OneSearch EBSCO

Exploring Fiscal Policy and Diversification Effects on Nigeria's Long-Term Economic Growth

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Article Info:

Article History:

Received: 2024-08-09

Revised: 2024-09-10

Accepted: 2024-10-06

Keyword:

Fiscal Policy, Economic Diversification, Economic Growth, ARDL

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Paper Type:

Research Paper

Abstract:

Purpose:

This study investigates the long-term impact of fiscal policy and economic diversification on Nigeria's economic growth, with a focus on understanding their interrelationships and effectiveness in driving sustainable development.

Methodology:

Using time-series data from 1983 to 2024, the study employs the Autoregressive Distributed Lag (ARDL) bounds testing approach to examine both the short- and long-run dynamics among key fiscal variables, diversification indicators, and real GDP growth.

Findings:

Empirical findings reveal a significant long-run relationship between fiscal policy instruments, particularly government expenditure and tax revenue—and economic growth. The results highlight the importance of strategic fiscal management and the need to accelerate diversification policies to reduce reliance on oil revenues and promote inclusive development.

Implication:

The study recommends that fiscal authorities adopt more growth-oriented expenditure frameworks and broaden the revenue base by enhancing non-oil sectors such as agriculture, manufacturing, and services. This research contributes to the policy discourse on fiscal sustainability and structural economic reform in Nigeria.

INTRODUCTION

Nigeria, as Africa's largest economy and a leading oil producer, faces unique economic challenges and opportunities. Over the decades, Nigeria's economy has been heavily reliant on its oil sector, which has shaped much of the country's fiscal and economic policies. Crude oil exports have historically contributed significantly to Nigeria's GDP, government revenue, and foreign exchange earnings, accounting for over 70% of total export revenues and more than 50% of government income (Central Bank of Nigeria [CBN], 2021). However, the over-dependence on oil has created substantial vulnerabilities. The country's economic trajectory has been marked by periods of growth, driven largely by the fluctuations in global oil prices, but also by substantial downturns, often triggered by oil price volatility, global economic downturns, and internal structural weaknesses (Ajakaiye & Fakiyesi, 2009).

Statement of the Problem. Nigeria's economic growth trajectory has long been characterized by volatility, heavily influenced by fluctuating oil revenues and inconsistent fiscal policies. Despite numerous reform efforts and policy frameworks aimed at diversifying the economy, the country remains overly dependent on oil exports, which makes it vulnerable to external shocks and global commodity price swings. Fiscal policies intended to stabilize and stimulate the economy often lack efficiency and long-term strategic focus, resulting in a limited impact on sustainable growth.

Conceptual Literature, Economic Growth. It could be said to consist of three components: the accumulation of capital, population growth, and ultimately, technological advancement and labor force growth. When a portion of personal income is saved and invested to increase future output and income, capital

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accumulation occurs. In order to accumulate capital, one must trade off present consumption for future consumption, giving up some now in order to obtain more later. Historically, population growth and the corresponding rise in labor force participation have been seen as beneficial factors in promoting economic growth. More productive workers result from a larger labor force, and a large overall population increases the potential size of domestic markets. Technological advancement leads to new and improved methods of completing traditional jobs. The advancement of technology could be neutral, labor-saving, and capital-saving

Economic Diversification. Economic diversification, according to Le-Yin Zhang (2003), is the process by which a wide variety of economic outputs are produced. The diversification of markets for investments or the diversification of income sources away from domestic economic activities (that is, income from foreign investment) can also be referred to by this term. Diversification does not necessarily mean specialization; rather, it means directing resources toward the most advantageous alternate applications. Economic diversification is "the process of shifting an economy away from a single inc source toward multiple sources from a growing range of sectors and markets," according to the United Nations Framework Convention on Climate Change (2019). It has historically been used as a tactic to promote positive economic growth and development.

Fiscal Policy. In order to impact government revenue and expenditure and accomplish macroeconomic goals that monetary policy also aims to accomplish, fiscal policy uses tools like taxes, budgets, and quotations. Raheem, Kareem, Aflabi, and Bashir (2013). It alludes to adjustments in government spending and taxation. There are two primary levels of government spending, sometimes known as public spending and taxation: national and local. Governments spend money on a number of things, such as education, health care, transportation, defense, interest on national debt, and benefits (for the retired, unemployed, and disabled).

Theoretical Framework. The relationship between fiscal policy, economic diversification, and long-term economic growth in Nigeria is explored through several key economic theories. These include Keynesian Theory, Endogenous Growth Theory, Structural Transformation Theory, Resource Curse Hypothesis, and Theories of Diversification. Each theory offers insights into how fiscal strategies and diversification efforts can impact Nigeria's economic trajectory, but they also have inherent assumptions and criticisms.

Keynesian Theory of Fiscal Policy. The Keynesian theory of fiscal policy suggests that government spending and taxation play a vital role in influencing aggregate demand and, consequently, economic growth. According to Keynes (1936), during periods of economic downturn or stagnation, active fiscal intervention through increased government spending can stimulate demand, create employment, and lead to economic expansion. For Nigeria, where oil price fluctuations often trigger economic volatility, the role of fiscal policy in stabilizing growth is crucial. Keynesian models argue that well-targeted fiscal policies can help mitigate external shocks, such as oil price declines, by boosting other sectors of the economy (Ajakaiye & Fakiyesi, 2009).

Endogenous Growth Theory. Endogenous growth theory, primarily associated with Romer (1990), posits that long-term economic growth is driven not just by external factors like capital accumulation but also by internal factors such as technological innovation, human capital development, and policy decisions. This theory suggests that fiscal policy can directly influence long-term growth by encouraging investment in sectors that drive technological progress and human capital development. In the case of Nigeria, diversification of the economy away from oil could be seen as a way of fostering endogenous growth by investing in non-oil sectors like agriculture and services (Romer, 1990). Through strategic fiscal policies that promote innovation and human capital, Nigeria could achieve sustainable economic growth in the long term.

Structural Transformation Theory. Structural transformation theory, as articulated by Lewis (1954) and Hirschman (1958), emphasizes the need for developing countries to diversify their economic base through a shift from primary sectors (like agriculture) to more industrial and service-oriented economies. For Nigeria, structural transformation is key to reducing its reliance on oil exports and ensuring more balanced, sustainable growth. The theory suggests that fiscal policy, by promoting investment in infrastructure, education, and industry, can facilitate

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the shift toward a diversified economy. Nigeria's fiscal policies need to support the transformation of sectors outside oil, thereby creating a resilient and inclusive economic framework (UNECA, 2016).

The Resource Curse Hypothesis. The resource curse hypothesis, introduced by Sachs and Warner (1995), argues that countries rich in natural resources, such as oil, may experience slower economic growth due to issues like corruption, political instability, and Dutch Disease (where over-reliance on natural resources leads to the neglect of other sectors). This theory provides a critical lens through which to examine Nigeria's dependence on oil and the potential risks it faces in trying to diversify its economy. Fiscal policies aimed at mitigating these effects, such as strengthening governance and diversifying public revenue sources, are essential for breaking the resource curse and promoting long-term growth (Sachs & Warner, 1995).

Portfolio Theory of Diversification. The Portfolio Theory of Diversification, propounded by Harry Markowitz in 1952, posits that investors can minimize risk and optimize returns by diversifying their investments across a variety of assets rather than concentrating on a single asset or sector. A criticism of this theory is that it may not apply well to developing economies with limited access to capital markets and technological capabilities. In the case of Nigeria, the theory assumes that the non-oil sectors are adequately developed to absorb investments. However, the reality is that agricultural and industrial sectors face infrastructure and productivity challenges (Markowitz, 1952).

The Stages of Economic Diversification Theory. The Stages of Economic Diversification Theory, proposed by Albert O. Hirschman in 1958, suggests that economies develop through sequential stages, beginning with a heavy reliance on primary production (such as agriculture or raw materials), then transitioning to industrial manufacturing and eventually advancing to service-oriented and knowledge-based sectors as they achieve higher levels of development. The main criticism of this theory is that it oversimplifies the diversification process. Not all economies follow a linear path of diversification, and many countries may face barriers in advancing through these stages due to external shocks or internal weaknesses such as political instability and poor governance. In Nigeria, the theory may not adequately account for the challenges in industrialization, particularly given the dominance of oil in the economy (Hirschman, 1958).

Empirical Literature. Several empirical studies have examined the role of fiscal policy and economic diversification in promoting long-term economic growth, especially in resource-dependent economies such as Nigeria. These studies often analyze the effects of government expenditure, taxation, and sectoral diversification on economic performance, using both time-series and panel data approaches. Akpan (2005) investigated the impact of government expenditure on economic growth in Nigeria using time series data from 1970 to 2002. The study found that capital expenditure positively influenced growth, while recurrent expenditure had a less significant impact. The study recommended increased allocation toward productive sectors to stimulate sustainable growth.

Iyoha and Oriakhi (2002) explored the long-term effects of fiscal policy on economic diversification in Nigeria. Their analysis showed that government investment in infrastructure and education contributed significantly to sectoral diversification and output expansion, particularly in agriculture and services.

Abang and Omang (2022) applied a diversification index to assess sectoral employment distribution in Nigeria and its effect on GDP growth. Their results indicated that economies with more evenly distributed employment across sectors tend to experience more stable and inclusive growth. The study concluded that fiscal policy can influence diversification by channeling resources toward underdeveloped sectors.

Measures of Economic Diversification. The existing literature presents various metrics for measuring economic diversification, each grounded in specific theoretical frameworks. These methods often assess aspects such as a country's dependence on commodity or goods exports, the proportion of employment across different sectors, the contribution of each sector to GDP, and the concentration of exports. Most approaches to measuring economic diversification link it to indicators of employment, income, or export distribution. Measures of absolute specialization typically highlight how few sectors dominate a country's total employment or GDP. Broadly,

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diversification indices can be categorized into two main types: those that evaluate a country's economic structure relative to a benchmark group of sectors (e.g.,

Summary of Literature and Gap of the Study. A substantial body of literature has examined the relationship between fiscal policy, economic diversification, and long-term economic growth, particularly in resource-rich developing countries like Nigeria. Classical and Keynesian economists emphasize the importance of fiscal policy as a tool for economic stabilization and growth. Keynes (1936) posits that government expenditure and taxation play a critical role in influencing aggregate demand, especially during periods of economic downturn.

In the Nigerian context, scholars such as Ajakaiye and Fakiyesi (2009) and Okonjo-Iweala and Osafo-Kwaako (2007) have highlighted how fiscal policy has historically been skewed towards oil revenue expenditure, with limited impact on economic diversification. Empirical studies (e.g., Iwayemi, 2012; Afolabi & Atolagbe, 2019) suggest that while fiscal policy has the potential to drive growth, it often fails to translate into broad-based development due to inefficiencies, corruption, and weak institutions.

The gap in the Literature. While extensive research exists on fiscal policy and economic growth, and a growing body of work explores the importance of economic diversification in Nigeria, few studies have integrated both concepts to investigate their combined effect on long-term economic growth. Much of the existing literature tends to analyze fiscal policy or diversification in isolation, failing to capture the dynamic interaction between the two in a resource-dependent economy.

Therefore, this study seeks to fill the gap by examining the interactive effect of fiscal policy and economic diversification on Nigeria's long-term economic growth using updated data and analytical tools. It will provide new insights into how fiscal frameworks can be optimized to support structural change and resilience in a volatile global economy.

METHODS

Research Design. The research design of the study used both descriptive and analytical techniques. The descriptive method analyzed developments in Nigeria's macroeconomic policy dynamics and diversification using descriptive tools like basic tables. The analytical approach estimated the pertinent equations using a variety of econometric techniques within the context of multiple regression modeling.

Model Specification. The theoretical underpinning of this study is rooted in theories of fiscal policy, economic growth, and diversification. Keynesian economics highlights the role of government intervention in stimulating demand and stabilizing the economy, especially in times of external shocks. Endogenous growth theory emphasizes the role of human capital, technological innovation, and policy decisions in driving long-term growth. Structural transformation theory advocates for a shift from agriculture-based economies to more industrialized and service-driven economies. In light of these theories, the study aims to examine how fiscal policy can both promote diversification and foster a more resilient and diversified economy in Nigeria.

The study used the Herfindal index of diversification (DIVX) and the neoclassical growth theory to investigate the relationship between fiscal policy and economic development and diversification in Nigeria between 1983 and 2024. The Herfindal index was chosen because it thoroughly examines every sector of an economy to ascertain whether it offers a healthy level of competition or is on the verge of becoming dominated by one or a small number of sectors. The Herfindal diversification index is:

Herfindal Index is equal to (1) i = 1….N where Si is the export share of commodity I in the country's entire export basket (excluding oil export) for a specific time period, and N is the total number of categorized export commodities in the economy (excluding oil export). Consequently, Si can be expressed as Si = (2). where X is the total export for a given period, and xi is the proportion of commodity X in total exports (not including oil exports). There is less diversity (and more concentration) in the economy when the Herfindal Index score is higher. To put it another way, economic activity is focused on a small number of economic sectors. A lower Herfindal Index

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value indicates a higher degree of ecological diversification. The percentage represents the Herfindal Index. A modified version of the Herfinal index was provided by the World Bank in 2019. The Diversification Index is calculated by assessing the absolute deviation of the country's share from the global structure, according to the statement. The degree to which the trade structure of a nation or group of nations differs from the global average is indicated by a diversification index, which has a range of 0 to 1. A larger deviation from the global average is indicated by an index value nearer 1. It is designed to be the opposite of a Herfindahl index. Therefore, DIVX = 1-(3), where DIVX is the Diversification index, is the modified Herfindal index of diversification. Our baseline neoclassical model has the following shape since the neoclassical model and the Cobb-Douglas production function fundamentally share the same structural form:

$$\text{for } Yt = At\, Kt\alpha\, Lt\, \beta$$

Where A is the total factor productivity or efficiency metric, and Y is the output.

K = Capital Stock

L = Workforce

α = Capital Output Elasticity

β = labor's output elasticity

We endogenizing the Solo residual or total factor productivity in line with the postulations of the endogenous growth theory by augmenting the entire framework to incorporate other variables relevant to the present study. Specifically, a is expanded to include a hybrid of other monetary (M), fiscal (F), and trade (T) variables influencing economic growth and diversification in Nigeria. Thus,

$$A = f(M, F, T)$$

Where M, F, and T represent monetary policy variables, fiscal policy variables and trade policy variables, respectively. The Mundell-Fleming framework is further strengthened by the emergence of endogenous growth theories and models (e.g., Romer, 1986; Barro, 1991), which suggest that other endogenous factors like macroeconomic policies (inflation, interest rate, GDP, government spending and tax, trade policies etc.), political stability, market distortions, human capital and education, etc., can also affect economic diversification and growth. Renelt (1991), for example, has attempted to integrate exogenous forces with endogenous factors in explaining economic diversification across countries. In this study, the augmented Solow neoclassical model is used.

Incorporating equation (5) into (4) transforms (4) into:

$$Yt = M, F, T\ \ Kt\alpha\, Lt\, \beta$$

Equation 6 is the augmented version of the neoclassical model. However, since the study is not on economy-wide output but on the effect of fiscal policies and diversification in Nigeria, we modify equation 3.6 to include the diversification index also as an independent variable represented as:

$$Yt = f(F, Kt\alpha\ Lt\beta, DIVX)$$

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Macroeconomic Policy Equation. Equation 7a above is the functional form of the fiscal policy and economic diversification-growth model. The model is expanded in equation (3.8) to accommodate key variables of fiscal policy. It should be noted that;

$$F = f(TAX, GEXP, DMD)$$

Substituting the above sub-equations into equation 3.7 to account for the general macroeconomic policies we have:

$$Y = f(TAX, GEXP, DMD, GFCF, LF, DIVX)$$

Equation 8 says that Nigeria's growth can be explained by the key fiscal policy and diversification variables on the right-hand side of the equation. The econometric specification of equation (8) is of the form:

$$Y = \pi_0 + \pi_1 TAX + \pi_2 GEXP + +\pi_3 DMD + \pi_4 GFCF + \pi_5 LF + \pi_6 DIVX + \varepsilon t$$

Presenting equation 3.15 in its log-linear form:

$$Y = \pi_0 + \pi_1 TAX + \pi_2 ln GEXP + +\pi_3 ln DMD + \pi_4 ln GFCF + \pi_5 ln LF + \pi_6 DIVX + \varepsilon t$$
$$\pi_3 < 0; \pi_1, \pi_2, \pi_4, \pi_5, \pi_6 > 0$$

The Federal Ministry of Finance (FMF), the National Planning Commission (NPC), publications from the International Monetary Fund (IMF) and the World Bank (IBRD), the Central Bank of Nigeria (CBN) Statistical Bulletin (Various Years), the National Bureau of Statistics (NBS) Various Years, and other pertinent journals and publications were the primary sources of the pertinent data used in this study. These are reputable and well-known sources of published data that are appropriate for information purposes.

Model Estimation Technique. The estimation technique/method that was used in the above model is both descriptive and analytical. The analytical technique is the multiple regression analysis of the ordinary least squares methodology. However, the precise empirical model for estimation is the ARDL model.

The OLS approach was selected due to its best linear unbiased estimator (BLUE) characteristics, as is customary in the literature. The fact that most economic series are typically believed to be non-stationary is another factor in the decision to use this method. When we say "non-statistical," we imply that the variables do not have a constant mean over time or a strong trend over time, and as a result, using the least squares technique directly may produce erroneous findings. Because of this, the majority of OLS regressions provide statistically erroneous results that are challenging to understand in a theoretical setting. Additionally, it uses fewer data points, making it user-friendly. The explicit form of the equations, with reference to the ARDL model, is as follows:

$$\Delta Yt = \beta 0 + \beta 1 lnYt - 1 + \beta 2 lnTAXt - 1 + \beta 3 lnGEXP\ t - 1 + \beta 4 lnDMD\ t - 1 + \beta 5 lnGCF\ t - 1 + \beta 6 lnLF\ t - 1 + \beta 6 DIVXt - 1 + \sum_{i=0}^{k} \lambda_1 \Delta Y_{t-1} + \sum_{i=0}^{k} \lambda_2 \Delta lnTAX_{t-1} + \sum_{i=0}^{k} \lambda_3 \Delta GEXP_{t-1} + \sum_{i=0}^{k} \lambda_4 \Delta lnDMD_{t-1} + \sum_{i=0}^{k} \lambda_5 \Delta lnGCF_{t-1} + \sum_{i=0}^{k} \lambda_6 \Delta LF_{t-1} + \sum_{i=0}^{k} \lambda_1 \Delta DIVX_{t-1}$$

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To determine whether the variables in the provided model have a long-term relationship, however, the cointegration test was employed. As was already indicated, the cointegration test used in this study was the ARDL, also known as the bound test. Two critical values—the upper and lower critical bounds—are computed at a certain level of significance. The limits test is used to determine whether cointegration exists, regardless of whether the regressors are I(0) or I(1) vs the alternative hypothesis. The following are the F-statistics.:

$$:\beta1= \beta2 = \beta3 = \beta4 = \beta5= \beta6= .....\beta n =0$$

$$:\beta1\neq \beta2 \neq\beta3 \neq \beta4 \neq \beta5 \neq \beta6\neq.....\beta n \neq 0$$

This test used the F-statistic (Bounds test). If the computed F-statistics is greater than the upper bound critical value, the null hypothesis of no cointegration is rejected. Similarly, if the lower critical bound value is greater than the F-statistics, then the null hypothesis will be accepted. If this is discovered, then our variables will be said to be co-integrated in the long run.

RESULTS AND DISCUSSION

Descriptive Statistics. The descriptive statistics for the macroeconomic variables included in this study are shown in Table 4.1. Examining the fundamental features of the dataset used for empirical analysis was the primary goal. The mean values for Y, DMD, DIVX, GEXP, GFCF, LF, and TAX were 0.64, 2682.50, 511000000.00, 399.69, 4010000000000.00, 39647683.00, 5502.74, and 307.90, respectively, according to the descriptive data displayed in table 4.1. For DIVX, DMD, GEXP, GFCF, LF, and TAX, the variables' corresponding minimum values are 0.270922, 22.22000, -27000000, 4.100000, 7.99, 23651428, and 0.561500, respectively, while their maximum values are 0.820898, 12594.89, 1.93, 1152.800, 2.14, 60698492, 24889.61, and 1207.300.

The skewness and kurtosis values of each variable in the models further strengthened the study. Skewness is a measure of the probability distribution of a real-valued random variable about its mean (Abang, Nwanne, Amaonye, Abang-Samuel; 2025). The histogram's symmetry is measured by its skewness, while its tail form is measured by its kurtosis. The degree to which the variable is near zero is the standard for a symmetrical distribution or skewness. DMD, GEXP, GFCF, LF, and TAX are all favorably skewed, according to a distribution skewness study, whereas Y is negatively skewed.

Table 1. Descriptive Statistics Result

	Y	DMD	TAX	GEXP	GFCF	LF	DIVX
Mean	0.641	2682.571	5.11	399.69	4.01	39647683	5502.743
Median	0.692	957.610	2.60	315.20	3.52	38460722	1073.890
Maximum	0.820	12594.89	1.93	1152.80	2.14	60698492	24889.61
Minimum	0.270	22.220	-270	4.10	7.99	23651428	17.690
Std. Dev	0.145	3685.974	5.78	364.20	6.51	10811298	7753.96
Skewness	-0.998	1.462	1.09	0.50	1.46	0.316705	1.253
Kurtosis	3.085	3.855	2.95	1.97	3.67	1.97	3.165
Jarque-Bera	5.989	13.930	7.182	3.09	13.56	2.178	9.474
Probability	0.050	0.001	0.027	0.21	0.00	0.336	0.008

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Sum	23.080	96572.55	1.84	14388.97	1.45	1.43	198098.7
Sum Sq.Dev.	0.744	4.76	1.17	4642532.	1.49	4.09	2.10
Observations	40	40	40	40	40	40	40

Source: Authors' computation using E-views 10 (2025)

Unit Root Test. The purpose of the unit root test was to determine the variables' statistical characteristics. The Phillips-Perron and Augmented Dickey-fuller (ADF) tests served as the foundation for the test. With the exception of the diversification index (DIVX), the labor force (LF), and growth output (Y), all of the variables were non-statistary at the first difference, meaning they did not exhibit trend statistically, or I(0), according to the results of the statistical test below (table 4.2). It is because, at the 1 or 5% level of significance, their ADF and PP statistic values are both below the crucial table values. The tests strongly support the hypothesis that all the variables are non-stational, especially of a random walk. Hence, we were unable to accept the alternative hypothesis of stationarity. Following the series' initial differencing, statistical normalcy was attained. Any dynamic specification of the model in the levels of series would be unsuitable and could result in false or nonsensical regression and incorrect inferences since a non-stational series exhibits a random walk.

Table 2. Unit root test results using Augmented Dickey-Fuller (ADF) and Phillips-Perron tests

Variables	ADF			Phillips-Perron		
	Level	1st Difference	Order of Integration	Level	1st Difference	Order of Integration
Y	-3.962863	-	I(0)	-3.962863	-	I(0)
TAX	-1.853973	-4.459253	I(1)	-1.315266	-5.862989	I(1)
GEXP	-1.809441	-7.379776	I(1)	-1.898378	-7.227267	I(1)
DMD	2.073422	-4.748670	I(1)	-	-4.773639	I(1)
DIVX	-8.107011	-	I(0)	-9.215822	-	I(0)
GFCF	0.506705	-5.725037	I(1)	0.852770	-5.739721	I(1)
LF	10.77889	-	I(0)	9.719026	-	I(0)

ADF test critical test values.

Level:	1st Difference:
At 5% = -3.552973.	5% = -3.574244
10% = -3.212361.	10% = -3.233456

Phillip-Peron test critical values.

Level:	1st Difference:
At 5% = -3.544284.	5% = -3.548490
10% = -3.204699.	10% = -3.207094

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Source: Authors' computation using E-views 10 (2025)

Granger Causality Test. To ascertain the nature of the causal relationship between macroeconomic policies and economic diversification, the Granger causality test was employed. The outcome, as shown in Table 4.3, indicates that fiscal policy and economic diversification are causally related in a unidirectional manner. Therefore, the alternative hypothesis—that growth and diversification do not grant fiscal policy—was accepted, while the null hypothesis—that fiscal policy (TAX, GEXP, OPEN, and LF) does not grant cause diversification—was rejected. It suggests that fiscal policy grants contribute to Nigeria's economic growth and diversification.

Co-integration (Bounds) Test. The results of the co-integration test utilizing the ARDL bounds testing methodology are shown in Table 3. According to the limits test results, the F-statistic value of 3.98 is more than the upper bound critical value of 3.67 at the five percent level of significance. Since the bounds testing procedure also establishes that the calculated F-statistic value has exceeded the upper critical bound value at the five percent significance level, the study accepts the alternative hypothesis, which states that there is a long-run co-integrating relationship among the variables included in the fiscal policy. It rejects the null version of the hypothesis, which states that there is no co-integration and, therefore, no long-run association among the variables. Based on this result, the study concludes that the variables are co-integrated, and hence, there is a long run relationship among them.

Table 3. ARDL Bounds Test for Co-integration

Test Statistic	Value	K
F-statistic	3.981482	3
Critical Value Bounds:	I0 Bound	I1 Bound
	Significance level:	
10%	2.37	3.20
5%	2.79	3.67
Decision: There is co-integration		

Source: Authors' computation using E-views 10 (2025)

ARDL Long Run Estimates of the Fiscal Policy, Economic Diversification – Growth Model. The empirical result of the long-run estimation of the fiscal policy model using ARDL estimation approaches, as displayed in Table 4.4, suggests that taxes have a positive association with growth, as indicated by its coefficient of 0.076. For every 1% increase in taxes, diversification will increase by 0.076 percent over the long run. The result is not in line with what Apriori would have predicted. Nevertheless, the variable's p-value of 0.022, which is higher than 0.05, indicates that it is statistically significant. Government expenditure (GEXP) and economic growth have a positive long-term association with a coefficient of 0.131; for instance, a one percent increase in GEXP will, ceteris paribus, result in a 0.131 percent increase in economic growth in Nigeria. It aligns with the expectations of Apriori. The variable is, however, not significant at a five percent level of significance since its p-value of 0.251 is greater than 0.05.

The results also show that economic growth and domestic debt (DMD) have a negative long-term relationship. The coefficient for DMD is -0.268. Consequently, for every 1% increase in DMD, growth will fall by 0.208 percent. It is consistent with apriori assumptions. DMD is regarded as statistically insignificant because its p-value of 0.04 is less than 0.05. Nigeria's economic growth is positively connected with its coefficient of economic diversification (DIVX), which has a value of 0.0839. Diversification will rise by 0.0839 percent for every 1%

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increase in DIVX, which is consistent with apriori predictions. The 0.000 shows that FDI plays a considerable influence in explaining differences in diversification, as evidenced by its p-value being less than 0.005.

Table 4. ARDL Long-run Estimation

Variable	Coefficient	Std. Error	T-statistic	Prob.
LOG(TAX)	0.075786	0.078870	6.592947	0.0222
LOG(GEXP)	0.130858	0.109494	1.195114	0.2506
LOG(DMD)	-0.268942	0.128500	-2.092923	0.0438
DIVX	0.083860	0.010937	7.667824	0.0000
C	33.77336	25.70823	1.313718	0.2087

Source: Authors' computation using E-views 10. (2025)

Short run ARDL Estimates of Fiscal Policy, Economic Diversification- Economic Growth Equation. Table 4.5 displays the fiscal sector model's parsimonious error correction results based on the Autoregressive Distributed Lag (ARDL) technique. According to the short-run dynamics finding, the error correction variable is statistically significant and has the expected negative coefficient, as predicted by theory. With a value of -0.617, it shows that 62% of the systemic imbalance in fiscal policy variables was fixed annually. It indicates a rapid transition from short-term disequilibrium to long-term equilibrium. Since its p-value is less than 0.05, its p-value of 0.011 indicates that it is statistically significant.

Additionally, because GFCF's p-value of 0.009 is less than 0.05, it is statistically significant. Further analysis of the data reveals that, with a coefficient of -2.662, labor force participation (LF) has a negative relationship with the increase of the dependent variable. It is not in line with apriori expectations because, in actual terms, a 1% increase in the labor force results in a -2.662 percent decline in economic growth. At the five percent significance level, the p-value of LF is 0.0003, indicating statistical significance.

Table 5. Error Correction Result of the Fiscal Sector Equation.

Dependent Variable: D(DIVX)				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D(Y(-1))	0.755303	0.256686	2.942515	0.0101
D(Y(-2))	0.602927	0.205854	2.928903	0.0104
D(Y(-3))	0.406767	0.154920	2.625649	0.0191
DLOG(TAX)	0.038134	0.138086	0.276164	0.7862
DLOG(TAX(-1))	-0.065290	0.140483	-0.464757	0.6488
DLOG(TAX(-2))	-0.692285	0.137996	-5.016714	0.0002
DLOG(GEXP)	0.070194	0.075044	0.935374	0.0364
DLOG(GEXP(-1))	0.158892	0.071886	2.210333	0.0430
DLOG(GEXP(-2))	0.040597	0.070213	0.578192	0.5717
DLOG(GEXP(-3))	0.272945	0.067072	4.069456	0.0010
LOG(GFCF)	0.044692	0.014987	2.982056	0.0093
LOG(LF)	-2.662637	0.573263	-4.644708	0.0003

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CointEq(-1)	-0.616667	0.066179	-9.318214	0.0113
R-squared	0.792681	Durbin-Watson stat		2.162748
Adjusted R-squared	0.661743	F-statistic		3.981482
Prob(F-statistic)	0.00232			

Source: Authors' computation using E-views 10 (2025)

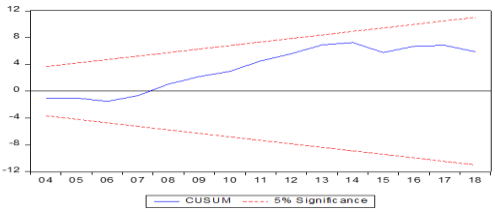
Diagnostic test (Heteroscedasticity Test, LM Test and Q Test). A number of diagnostic tests were carried out to see whether the estimated equation was adequate. To determine whether the estimated model was adequate or normal, normality tests like the Breusch-Godfrey serial correlation Lagrange Multiplier (LM) test and Q-statistics were used. Table 6 provides a summary of the test outcomes. The model's autocorrelation issue was demonstrated by the Breusch-Godfrey serial LM test statistic of 0.426013 and its probability value of 0.4342. The fact that the Chi-square probability value of 0.7315 is more than the 5% significance level supports this. It suggests that there is no autocorrelation in the calculated equation because the residual terms are independent.

Table 6. Diagnostic test

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	0.426013	Prob. F (2,13)	0.4342
Obs. R-squared	0.196286	Prob. Chi-Square(2)	0.7315
Breusch-Pagan-Godfrey Heteroskedasticity Test			
F-statistic	0.723564	Prob. F(16,15)	0.7362
Obs. R-squared	13.93928	Prob. Chi-Square(16)	0.6032

Source: Authors' computation (2025)

Stability Test for Fiscal Policy Equation. Following the estimation of the ECM models, the stability of the parameter was examined using the Cumulative Sum (CUMSUM) and Cumulative Sum of Squares (CUMSUMSQ) tests. The CUMSUM and CUMSUMSQ statistics are both within the crucial boundaries of the ± five percent threshold of significance, as shown in Figures 1 and 2. There is a long-term relationship between fiscal policies and economic growth in Nigeria, according to these plots, and the coefficients of the results being estimated are steady over time. Thus, this suggests that the coefficients are undergoing a progressive change.



Source: Arasomwan, Abang, Ayodele and Omang (2024)

Figure 1. CUSUM for Fiscal Policy Equation

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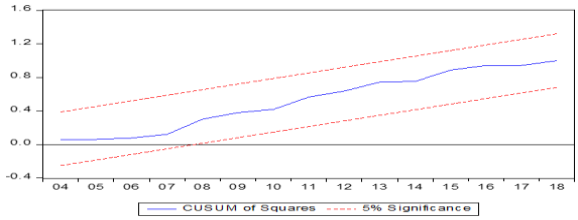

Source: Authors' computation (2025)

Figure 2. CUSUMSQ for Fiscal Policy Equation

Domestic debt has a major detrimental impact on fiscal policies over the long term. The empirical findings corroborated earlier research and were consistent with the claims of the majority of debt/borrowing theories, which hold that public and external debts have similar implications for economic growth and diversification. Stated differently, the relationship illustrates how the outcome has a detrimental impact on Nigeria's economic diversification. It is consistent with what Ayuba and Mohd Khan's (2019) investigation found. Their findings showed that while domestic debt has a favorable impact on the overall amount of government revenue, it has a negative impact on the economy.

CONCLUSION

The pursuit of sustainable and inclusive economic growth in Nigeria necessitates a deliberate recalibration of fiscal policy and a firm commitment to economic diversification. Over the decades, Nigeria's overreliance on oil revenues has exposed the economy to recurrent cycles of vulnerability, fiscal instability, and missed opportunities for broader development. It has become increasingly evident that without a strong and responsive fiscal framework and a proactive shift towards non-oil sectors, long-term growth will remain elusive.

Fiscal policy must, therefore, be harnessed not merely as a tool for short-term stabilization but as a strategic instrument for structural transformation. Sound fiscal management anchored on prudent expenditure, improved revenue mobilization, and counter-cyclical planning is crucial for creating the macroeconomic environment necessary for investment, innovation, and productivity. Furthermore, fiscal transparency, accountability, and efficient public spending are foundational for restoring public trust and attracting both domestic and foreign investment into key growth sectors.

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