

NEXUS OF FISCAL DEFICIT AND ECONOMIC GROWTH IN NIGERIA

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Abstract: The aim of the study was to determine the relationship between budget deficit and economic growth in Nigeria was examined using data derived from Central bank of Nigeria annual bulletin and world bank website. Data used for the study were annual data covering the period of 1970 to 2024. The study examined the relationship using multiple regression and autoregressive distributed lag whilst various diagnostics and post estimation analysis were made. The outcome of the study confirmed that budget deficit have positive effect on real GDP and hence significantly improve economic growth in Nigeria. Based on findings the study recommends that the efficiency of public spending needs to be enhanced in Nigeria. This involves a more efficient allocation of deficit spending among optimal sectors in the economy. The extensive effect of budget deficits on the economy also requires that fiscal sustainability be ensured over time in Nigeria. The medium-term fiscal framework that forms the foundations of national budget need to be fully implemented in each budget cycle. Regular fiscal audits and transparent budgeting can ensure deficits remain sustainable while delivering economic benefits. The study further recommends that to optimize economic growth, policymakers need to strategically use fiscal deficits to boost GDP.

Keywords: Deficit, Economic Growth, Real Gross Domestic Product.

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Introduction

The function of economic management is one of the role governments plays in the society. Government are saddled with responsibility of generating revenue and using the revenue to meet societal needs. There is however a mismatch between revenue generation and anticipated expenditure creating a gap which could be a surplus or a deficit. Therefore, governments when faced with a precarious situation of deficit must carry out interventions to bridge the gap either by borrowing or through seigniorage. Government policy on deficit financing is an important instrument of fiscal policy, used to enhance economic growth and development in the country (Onwe, 2014).. Fiscal policy plays a key role in the sustenance of economic growth and achievement of macroeconomic stability.. However, the impact of the policy decision on economic growth has been a subject of controversy. From the extant literature and theoretical perspectives conflicts exist. First the Keynesian theory propounded by John Maynard Keynes suggested government through fiscal policy move the economy towards the regulation of its revenue and expenditures and emphasizes the need for government intervention in the economy. The Ricardian school of thought contrarily suggested that government interventions in the economy are irrelevant. This view is further supported by the Neoclassical theory which states that fiscal deficit is the cause of economic instability and retardation of economic growth as it hikes interest rates, crowds-out private investment and places an undue tax burden on future generations.

Exacerbating the debate is conflicting results from empirical studies (Usman and Agunbiade and Akuso,2024; Sunday and Philomena ,2020; Oluwole, Solawon and Oduke,2020; Nwanna and Nkiruka ,2019; Nwaeke and Korgbeelo ,2016; Oluwole, Solawon and Oduke ,2020; Sunday and Philomena ,2020; Adofu, and Abula, 2010). While some studies

(Usman and Agunbiade and Akuso,2024 Kelly, 1997; Bahmani, 1999; Aghion & Marinescu, 2007; Kumar & Soumya, 2010; Onwioduokit, 2012, Ekpo, Akpan and Ekaetor, 2024; Hussain & Haque, 2017, Sharma & Mittal, 2019 Nayab,2015;) found a positive association of fiscal deficit to economic growth thus supporting the Keynesian perspective other studies(Chukwu, Otiwu and Okere (2020; Kolawole,2023 ;Adebowale ,2021; Austine et al.,2022 Barro, 1991; Ghali, 1998; Goher et al., 2011; Iqbal et al., 2017; Tung, 2018; Aero & Ogundipe, 2018; Epaphra ,2017) Sharma & Mittal, 2019, Adegboyo et al., 2020 Anantha &Gayithri, 2016; Fatima et al., (2012; Onwioduokit& Ekong (2016 Yusuff &Abolaji (2020;) confirmed a negative association. However, some other studies (Ghali & Al-Shamsi, 1997). Rahman (2012 Adam & Bevan (2005; Van and Sudhipongpracha (2015) found no relationship

Despite the arguments and conflicting empirical studies the need for government intervention is more pronounced because of the developmental needs of the various countries. In Nigeria for example there is galloping inflation, unemployment, poverty, poor infrastructural development, and high infant mortality, an increase in number of out of school children, low per capita income and low life expectancy. These problems necessitated the adoption of budget deficit policy over the years except in the oil boom era with the intent to break the vicious cycle of poverty and improve infrastructural development whilst also addressing other developmental needs. However, in spite of Nigerian government efforts at devising policy measures aimed at overcoming fiscal deficit, fiscal deficit has persisted in Nigeria's economy with its adverse effects on key macro-economic variables such as interest rate, exchange rate and inflation. The problem of budget deficit and its attendant negative effects still persist in Nigeria. Nigeria is currently facing debt overhang with huge accumulation debts and



interest on the principal sum. For instance in Nigeria's 2025 budget, tagged "Budget of Restoration," projected a significant deficit of approximately ₦13.08 trillion to ₦13.39 trillion, designed to be funded primarily through new borrowings. with a Deficit-to-GDP Ratio: The deficit represents roughly 3.87% - 3.89% of the estimated GDP, which is noted to be lower than previous years but still poses sustainability concerns.. From statistics released by the debt management office Nigeria's total public debt rose to ₦153.29 trillion as of September 30, 2025. This represents an increase of ₦900 billion, or 0.59 per cent, from the ₦152.39 trillion recorded in June 2025. The country's debt stock is projected to climb above ₦177.14 trillion by the end of 2026, driven largely by an estimated ₦23.85 trillion budget deficit for 2026. The persistent increase in budget deficit in Nigeria is a perennial problem which ignites debates from scholars and other stakeholders as to its impact on economic growth. Governments that are experiencing fiscal deficits often embark on borrowing or printing of currencies to fill the gap in the budget and these are largely inflationary with adverse effects on the economy. On the other hand, the consequence of borrowing to finance current expenditures could crowd out private investment and distort economic growth and development. Additionally, this crowding-out effect could have an adverse effect on economic development. (Liaqat, 2019). This implies that continuous borrowing and increasing taxes could have an adverse effect on private investment which can trigger poor growth and development. Despite increased borrowing to fund budget deficit the country is plagued with poor policy implementation, inconsistency of government macroeconomic policies, low growth of foreign investment, lack of growth in the real sector, and high level corruption, bureaucracy, financial indiscipline and rascality in the public sector. The above scenarios has necessitated many empirical works with conflicting results hence the need for more studies

Literature

Conceptual Framework

Budget Deficit

A budget deficit occurs when a government, organization, or entity spends more money than it receives in revenue over a specific period, resulting in a negative financial balance. It signifies that expenditures exceed income, forcing borrowing to cover the shortfall. Common causes include high spending, low tax revenue, or economic downturns. the Budgetary deficit is the only difference between all the receipts and all the expenses in both terms, that is revenue and capital account of the government. Budget deficits generally stem from increased government spending (e.g., social programs, infrastructure) or reduced tax revenue due to economic slowdowns, recession, or lower tax rates.. Deficits are typically financed by borrowing money, which adds to the national debt. Persistent deficits can lead to higher interest rates, increased national debt, and potential inflation. However, some argue they can be used to stimulate economic growth during downturns.

According to European commission deficits are commonly measured as a percentage of a country's Gross Domestic Product (GDP). For instance, in the European Union, member states are expected to keep their deficits below 3% of their GDP. The World Bank (2005) described fiscal deficit as an excess of the public sector spending over its revenue. A fiscal deficit arises when

government outlays exceed its revenue. . Government deficit spending is believed to have stimulating effects on the economy during times of recession by raising aggregate demand, hoisting private investment, creating employment, and increasing output and income.

Economic growth

Economic growth is the increase in a country's production of goods and services over time, typically measured as the percentage change in real Gross Domestic Product (GDP). It signifies an expansion in an economy's productive capacity, driven by increased inputs (labor, capital) or higher productivity. According to Dwivedi (2009) Economic growth, in real terms, means a sustained increase in per capita national output or net national product over a long.

Theoretical Underpinning

Keynesian Theory

In managing an economy, there are challenges of instability, economic stagnation, unemployment inflation and mismatch of revenue and expenses. Keynesian theory recommended budget deficit as a panacea for addressing economic challenges. Keynes argues that budget deficit is a mismatch strategy used by the government during period of poor economic activity and that during such periods an intentional budget deficit can stimulate aggregate demand and encourage production. It further argues that when fiscal deficits stimulate consumption and increases income, saving and capital accumulation will not be negatively affected. Thus, with proper planning deficits can generate positive economic consequences.

Ricardian Equivalence Hypothesis

Departing from the Keynes school of thought , Ricardian equivalence hypothesis propounded by David Ricardo and expanded by Barro (1989), suggested that budget deficits have no effect on aggregate demand and interest rate and also does not affect economic growth and consequently deficits does not stimulate nor inhibit economic growth. Deficit financing implies borrowing to meet obligations and credits obtained goes with expected repayment. Ricardo further argued that the motive for borrowing by governments was intentional avoidance of increasing tax. However, as payments fall due government reverses its earlier avoidance of increases of tax and acts to increase taxes and thereby collect revenue which was previously delayed to meet existing debt obligations. Tax payers in response to government actions and acting rationally during periods of tax reliefs save the additional disposable income created by tax reliefs instead of spending. REH further argues that based on government action and tax payers reaction if fiscal deficit and savings grow at the same rate, the net savings and interest payment will remain constant. Consequently, current budget deficit financed through borrowing instead of taxes have no effect on current account balance because a rise in private savings will provide sufficient funds within the economy to prevent further borrowing. REH predicts government efforts to influence total demand using deficit by increasing spending through borrowing and reducing taxes will fail because total demand will remain constant as reduction in current taxes will be compensated by a corresponding future increase in taxation thereby ensuring stability of interest rates. According to Barro (1989) and ; Saeed & Khan (2012) under this scenario total demand would remain constant and tax reductions will be compensated by a

corresponding future rise in taxes thereby maintain interest rate at present levels which ensures private investment, current account balance, exchange rate and domestic production also remains static. Thus, deficit have no effect on economic growth and does not crowd in or crowd out private investments.

Neoclassical Theory

The neoclassical theory proposed a balanced budget without deficits. The theory opine that deficit destabilizes the economy and retards growth by raising interest rates thereby crowding -out private investment whilst concurrently increasing future tax burdens. Using “resource displacement” and “financing cost” they explained deficit spending transfers resources from productive sector (private sector) of the economy to the unproductive sector (government) which is characterized by inefficiency and misallocation of resources. Deficit spending create servicing costs of debt, imposes constraints on private sector as taxes will be increased to generate revenue to service the debt and consequently constrain the capacity of the sector to accumulate savings for investment purposes. The theory assumes individual plan their lifecycle consumption and full utilization. Further by shifting taxes to future generations, persistent fiscal deficit raises total lifetime consumption and that an increase in current consumption inevitably means a reduction in savings. To raise savings, interest rates must increase, thereby bringing the capital market into equilibrium. High interest rate dampens private investment; hence fiscal deficit can ‘crowd out’ private investment. Consequently, the private sector being an engine of economic growth, fiscal deficits will impact negatively on economic growth.

Empirical Review

Usman and Agunbiade and Akuso (2024) examined public budget deficit financing and economic growth in Nigeria using time series data for the period of 1986 to 2021. specifically, public budget deficit financing sources such as; treasury bills, treasury bonds, oil revenue to total revenue ratio, non-oil revenue to total revenue ratio and external reserve have asymmetric impacts on economic growth in the Nigerian economy within the period under review. Amade and oyiebe(2024) investigated impact of Budget Deficit on economic growth of Nigeria between 1983 and 2023. that budget deficits impacted significantly on the economic growth of Nigeria under the review period. Ekpo, Akpan and Ekaetor (2024) examined impact of fiscal deficits on economic growth in Nigeria from 1981 to 2021 and the causality between them. Result showed that fiscal deficit (FD) has a positive impact on economic growth both in the short-run and the long run in tandem with the Keynesian proposition. Gross capital formation (GCF) and trade openness (TOP) had a positive and significant effect on economic growth (RGDP) both in the long-run and short-run. Kolawole (2023) studied budget deficit on economic growth in Nigeria for the period 1981 to 2021, using the Bai-Perron multiple structural breaks and ARDL study confirmed budget deficit has a positive and significant impact on economic growth in Nigeria.

Austine et al. (2022), in examining how fiscal deficit

impacts Nigeria’s economic growth during the period 1981-2020, utilised the ARDL approach and found that fiscal deficit has a negative effect on economic growth. Alam et al (2022) investigated the effect of deficit financing on economic growth in Bangladesh, using cointegration and the VECM technique found that government deficit financing has a positive impact on economic growth. Adebowale (2021) empirically investigates the asymmetries in the relationship between Nigeria’s budget deficit and economic growth from 1986 to 2020. The Central Bank of Nigeria Statistical Bulletin (2020) was used in the study. The study utilizes the Non-linear ARDL model developed by Shin et al. (2014). The findings show that budget deficit affect economic growth both in the short and long run negatively. Yusuff & Abolaji (2020) adopted the bound test technique and found that budget deficit has a significant positive impact on economic growth. Furthermore, Akoto (2020) examined the impact of the deficit on economic growth in Ghana from 2007-2016 and confirmed that a negative correlation exists between deficit financing and economic growth. Van, Ha & Quyen (2020) examined association between public debt, budget deficit, and sustainable economic development. The study found that public debt and budget deficit had negative effects on sustainable development, while the effect of control of corruption was positive. Chukwu, Otiwu and Okere (2020) explored effect of budget deficit on economic growth of Nigeria for period, 1980-2019. Budget deficits were discovered to have a significant negative relationship with GDP growth rate, real private investment, inflation rate, real exchange rate, and a significant positive relationship with real interest rates. Nwanna and Nkiruka (2019) Studied the effect of deficit finance on Nigeria economic growth. Findings revealed that deficit financing through external debt borrowing has a significant negative effect on Nigeria’s economic growth. Also, domestic debt has a positive significant effect on Nigeria’s economic growth, while debt service has no significant effect on Nigeria’s economic growth. Okah, Chukwu and Ananwude (2019) examines the effect of deficit financing on economic growth of Nigeria from 1987 to 2017. Study revealed deficit financing has positive but insignificant effect on Nigerian economic growth.

Methodology

Research Design

This study is based on secondary data obtained from annual .The main source of data is the World Bank data website, Central Bank of Nigeria Bulletin, Federal Office of Statistics . Information is collected from annual reports from Central Bank of Nigeria Bulletin, World Bank country report and Federal office of statistics. The choice of secondary data is due to the nature of the data which permits quantitative measurements. To analyze the impact of budget deficit on economic growth in Nigeria, the study employed the autoregressive distributive lag (ARDL) model.

Measurement of Variable

The measures of the variables are summarized on the table below:

Measurement of Variables summarized on Table 3.1 below:

Independent Variable	Measurement	Expected Sign
Budget deficit	Total budget deficit to GDP ratio for fiscal year reported by CBN (Buseni, 2016)	Positive
Dependent Variable		
Real Gross domestic product (RGDP)	Defined as the value of the goods and services produced by the nation's economy less the value of the goods and services used up in production	Positive

Model Specification

In an attempt to examine the effect of budget deficit on economic growth the study modifies the model in the works of Idris and Suleiman (2019) and Inyama (2013). In line with their models, the model for this study is formulated as follows:

$$RGDP = \beta_0 + \beta_1 LogTPD + U_1, t, \dots \dots \dots (i)$$

Estimation techniques

Unit root test

Macroeconomic variables are generally known with their random walk nature, which can be mitigated when converting it into first differencing. Datta and Kumar (2011) note that regressing a non-stationary series on another would generate spurious results. In an attempt to guide against this, Augmented Dickey-Fuller (ADF) technique developed by Dickey and Fuller (1979) was employed. This test is necessary as it guides the study on the selection of appropriate estimation techniques required for the analysis. The trend and intercept of the unit root are represented in equations (10) and (11), respectively:

$$\Delta Y_t = \beta_0 + \lambda Y_{t-1} + \beta_i \Delta Y_{t-1} + \mu \tau \text{ for intercept} \dots \dots \dots (x)$$

$$\Delta Y_t = \beta_0 + \lambda Y_{t-1} + \beta_\mu + \beta_i \Delta Y_{t-1} + \mu \tau \text{ for trend} \dots \dots \dots (xi)$$

Where tY is the tested variable for unit root, Δ is the first difference, $t_i \mu$ denotes error term at period, $i-1$ tY represent the one period lag of the tested variable for unit root.

Autoregressive distributed lag (ARDL)

Following the unit root test, the study proceeds to examine short and long run relationship among the variables. This is done using autoregressive distributed lag (ARDL) known as the bound test approach to co-integration. ARDL model developed by Pesaran, Shin and Smith (1996) and later popularized by Pesaran, Shin and Smith (2001) is more advantageous to other co-integration procedures as it can be used when the variables under consideration are integrated of order zero $I(0)$ and order one $I(1)$

but will crash when integrated stochastic trend of $I(2)$ is found. With this, bound test eliminates the variability in the order of integration against co-integration approach. Also, it produces better result because the error correction mechanism can be obtained via simple linear transformation, which integrates short-run adjustments with long-run equilibrium without losing any information in the long run. Also, for a small sample size of 55 observations (1970–2024), the approach is more suitable.

Two sets of adjusted critical values put forward by Pesaran, Shin, and Smith (2001) are the lower and the upper bounds. The former assumes that all variables are $I(0)$, while the later indicates that they are all $I(1)$. The decision is that the null hypothesis of no co-integration is rejected if the F-statistics falls above the critical upper bound test, while the null hypothesis cannot be rejected if it falls below the lower bound. Lastly, the result would be regarded as inconclusive if it falls between the lower and upper bound. In line with Pesaran et al. (2001), the unrestricted error correction mechanism for testing co-integration among the variables used in this study is stated as follows:

$$\Delta RGDP_t = \beta_0 + \sum \beta_i \Delta LogTPD_{t-1} + \alpha_1 \Delta LogTPD_{t-1} + U_1, t \dots \dots \dots (i)$$

The ARDL long-run model is estimated if cointegration is found while the short-run model is estimated if otherwise

$$\Delta RGDP = \beta_0 + \beta_1 LogTPD_{t-1} + U_1, t \dots \dots (ii)$$

$$\Delta RGDP = \alpha_0 + \alpha_1 \sum \Delta LogTPD_{t-1} + ECM + U_1 \dots \dots (iii)$$

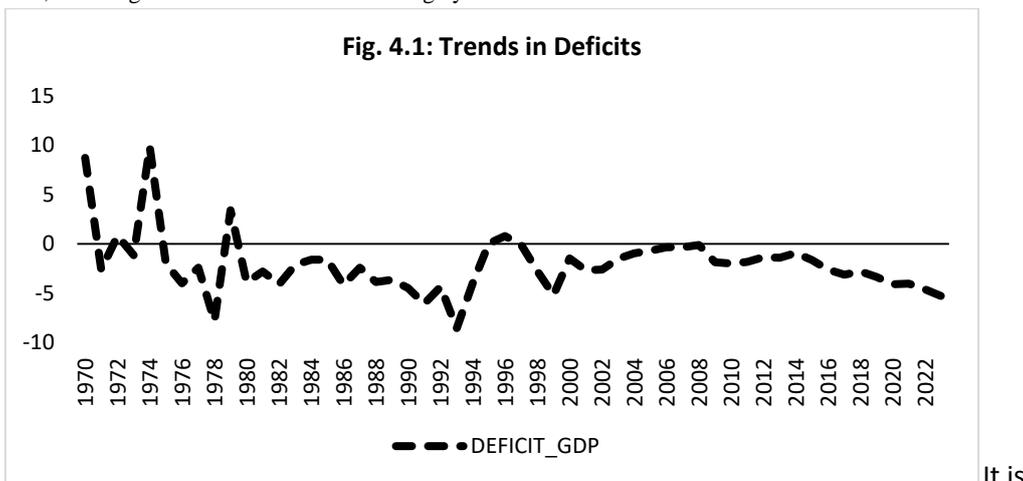
Results

Trend Analysis

The trends in the major variables in the study are analysed in this section. Figure 4.1 shows trends in and historical analysis of fiscal deficits fiscal deficit has been less smooth over the period. In terms of trends, it is seen that the deficit trend was highly volatile in the 1970s and 1980s. The peaks in positive fiscal deficits in the early 1970s suggest large spending arising from the oil boom that occurred just after the civil war. The sharp decline into negative

territory in the early 1980s also reflects falling oil prices and rising fiscal strain. There were also sustained negative deficits after 1980 towards the early 1990s with show chronic deficit fiscal imbalances. This period coincided with the Structural Adjustment Programme (SAP) era and worsening external performance of the economy. After 2000, although the deficits remain largely

negative, hovering between -2% and -5% of GDP, there are periods of mild respite around 2005–2008 which was a result of the Paris Club debt relief as well as strong oil revenues. After 2015, the deficits worsened slightly.



The trend in real GDP and in Figure 4.3.. Real GDP growth rate is highly volatile over the period with frequent and sometimes sharp swings between positive and negative values. There were major dips in the economy in the early 1980s and mid-1990s with growth rates plunging below -10% at times. The period between 2000 and

2014 appears to be the most buoyant growth performance era (reaching above 10%). RGDP does not show a consistent upward trend. Moreover, the early 1980s and mid-1990s saw severe economic contractions (negative RGDP growth).



Descriptive Statistics

Table 4.1 presents the descriptive statistics for the variables in the study. The mean RGDP growth rate is 4.01 percent which indicates a moderate level of economic growth in Nigeria over the study period. The standard deviation of 6.25 percent is much larger than the mean value. This suggests that there is a high level of

variability in RGDP over time. Thus, economic growth since the 1970s has been quite unstable with periods of very low or moderately high rates on average. The skewness of 0.08 indicates a positively skewed distribution, while the kurtosis of 5.14 suggests a leptokurtic distribution.

Table 4.1: Descriptive Statistics

Variable	Mean	Max.	Min.	Std. Dev.	Skew.	Kurt.	J-B
RGDP	4.01	25.01	-13.13	6.25	0.08	5.14	1.18
DEFICIT_GDP	-2.05	9.80	-8.57	3.06	1.68	8.45	3.72

For the deficits, it is seen that average fiscal deficit to GDP ratio is -2.05, which is relatively low, especially when considering that the 2007 Fiscal Responsibility Act pegs annual deficit ratio and 3.0 percent of GDP. The maximum deficit ratio of over 9 percent and a minimum of -8.67 percent shows that there has not been much fiscal discipline in the public sector over the years

Unit Root and Cointegration Analysis

The unit root test for the variables is used to examine the level of stationarity of the time series used in the empirical analysis. This test is important because non-stationary time series are non-mean reverting and analysis based on such data may result in spurious regression relationships. In this study, the Augmented

Dickey Fuller (ADF) test of unit roots (test of the stationarity of the datasets) is employed. The ADF test has the advantage of being an indirect approach to testing unit roots with particular focus on stationarity processes of the dataset. The results of the unit root tests are presented in Table 4.4. The ADF test results shows that, only the REC_PERF and INFL variables have significant ADF statistic in levels when the variables are in levels. This shows that these two variables are stationary in levels and is thus, integrated of the zero order (i.e., I[0]). All the other variables are non-stationary in levels. These variables became stationary after first differences, showing that the variables are I(1). Thus, the variables exhibit mixed stationarity status.

Table 4.4: Unit Root test for Variables

Variable	ADF Test		Order of Integration
	Levels	First Difference	
RGDP	-1.660	-10.94**	I(1)
DEFICIT_GDP	-7.097**	-13.64**	I(0)

Note: * and ** indicate signifies at 5 and 1 percent levels respectively. Source: Author’s computation, 2025.

From the unit root tests, it is seen that the integration status of the variables is mixed (some variables are I(1) while others are I(0)). Thus, all variables in the model are not integrated of the same order, which implies that the normal cointegration test may not generate adequate estimates. In the study, the Bounds cointegration test procedure within the ARDL approach to cointegration is

employed for the cointegration test. The results of the Bounds cointegration test is reported in Table 4.5. The test evaluation is based on the estimated F-statistic values for each of the equations which are tested against the critical values for the lower (I0 Bounds) and upper (I1 Bounds) based on their critical F-values.

Table 4.5: Bounds Cointegration Test

Test Statistic	Value	Signif.	I(0)	I(1)
<i>Eqn: GDPPC</i>				
F-statistic	9.185	10%	1.99	2.94
K	6	5%	2.27	3.28

Source: Author’s computation, 2025

From the results in Table 4.5, it is seen that the computed F-statistics for the models range from 1.99 to 2.27 while the 5 percent critical values for the I(0) and I(1) bounds are 2.94 and 3.28 respectively. This shows that the F-statistics values are all greater than both the I(0) and I(1) values in the critical test outcomes at the 5 percent level. Therefore, the estimated F-statistics pass the significance test at the 5 percent level. The null hypothesis of no cointegration is rejected for each equation, stating that a long run relationship actually exists among the combination of variables for each of the equations. This further establishes the robustness of the ARDL estimation framework used in the study.

Regression Analysis (ARDL Results)

the Autoregressive Distributed Lag (ARDL) estimation framework was used in the empirical model determination. This modeling procedure therefore estimates both short-run dynamics and long-run equilibrium relationships between budget deficit and economic growth. The results of the estimation for real GDP are

presented in Table 4.6. The model is seen to exhibit impressive diagnostic indicators. The adjusted R-squared value is 0.791 which shows that the model explains approximately 79.1 percent of the variation in real GDP growth over the period. This shows a very good fit for the model. The F-statistic of 19.596 is also significant at the 1 percent level, which indicates that the model is statistically significant overall and that the explanatory variables jointly influence real GDP.

The short-run estimates are reported in the upper panel of the results in Table 4.6. These estimates show the temporary or immediate effects on economic growth. In the short run estimates, the coefficients of current and lagged DEFICIT_GDP are significant at the 1 percent level. It shows that increases in the deficit-to-GDP ratio increases real GDP in the short run. The lagged effects is however negative and indicates that the initial positive effect of fiscal deficits reverses over time.

Table 4.6: ARDL Results for Real GDP Estimation

Variable	Coefficient	t-Statistic	Prob.
<i>Short run</i>			
D(DEFICIT_GDP)	0.839	5.464	0.000
D(DEFICIT_GDP(-1))	-0.591	-3.343	0.002
D(DEFICIT_GDP(-2))	-0.325	-2.163	0.037
ECM _{t-1}	-0.948	-9.463	0.000
<i>Long run</i>			
DEFICIT_GDP	1.062	2.544	0.016
C	6.733	2.418	0.022
Adj. R-sq.	0.791		
F-statistic	19.596		

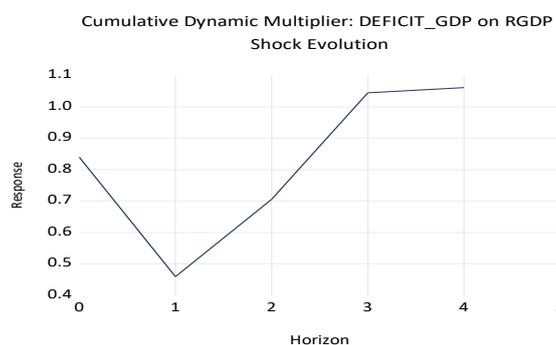
Source: Author’s computation, 2025

The results of the long run estimates are reported in the lower panel of the results in Table 4.6. The long-run coefficients represent the equilibrium relationships and are more stable estimates, as they reflect how variables affect real GDP per capita when the economy has fully adjusted. In the long run result, the coefficient of DEFICIT_GDP ratio is significant at the 1 percent level and is positive. This shows that fiscal deficit from budgets have significant impact on economic growth in the long run. Thus, after all adjustments have been made over time, every 1 percent increase in the deficit-to-GDP ratio increases real GDP per capita by 1.162 percentage points in Nigeria. Thus, persistent fiscal deficits in Nigeria appear to have a positive economic growth effect. Recall that fiscal deficit in a developing economy often implies tendency for expansionary fiscal policy move. However, given that deficits are often not sustainable over time, it could lead to debt servicing burdens that offset these positive benefits in the

Nigerian economy. The stronger long-run effect of fiscal deficit compared to the short-run (0.839) suggests cumulative benefits of deficit spending over time in Nigeria.

The general outcome from the real GDP result reveals that deficit spending can support long-run growth if directed toward productive investments. The dynamic adjustments of fiscal deficit to long run economic equilibrium is captured in the dynamic multiplier chart in Figure 4.5. The chart illustrates how a change in the deficit-to-GDP ratio and debt impacts economic growth over a 5-period horizon. The 5-period dynamic multiplier chart indicates that an increase in the deficit-to-GDP ratio initially reduces economic growth. This is then followed by a gradual recovery and stabilisation at a higher RGDP level by the fifth period. This suggests a positive long-run relationship between fiscal deficits and economic growth with a net stimulative effect after adjustments. T

Fig. 4.5: Cumulative Dynamic Real GDP Multiplier



Post-Estimation Robustness Tests

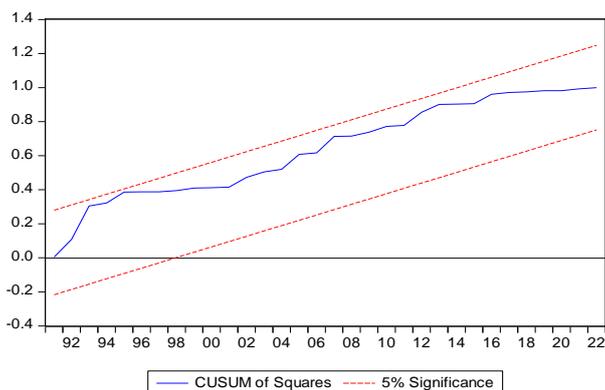
The tests for structural stability of each of the equations estimated in the results stability based on the CUSUM of squares test are presented in Figure 4.10. The CUSUM of squares lines are expected to completely lie in between the dotted 5 percent significance lines (red lines). The results show that the CUSUM-

square lines for the result for each of the model estimates are all circumscribed within the dotted 5 percent bound lines. This shows that the estimations are stable within the analysis for the four equations. The influences of structural breaks are fully taken into cognisance with the model specification and estimation procedure.

These stable estimates are therefore reliable for making policy conclusions and recommendations.

Fig. 4.10: CUSUM of Squares Plots for Variables

Real GDP



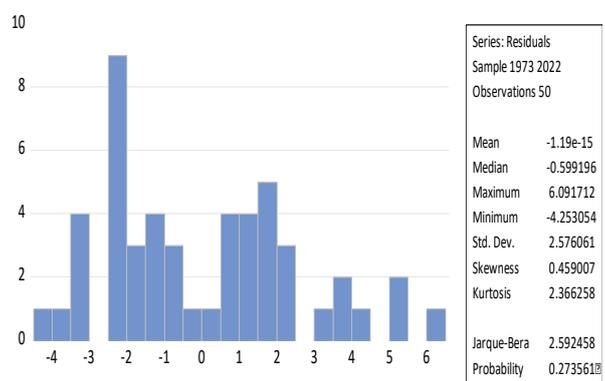
Given that dynamic analysis was conducted, there is need to also evaluate the estimated models to ascertain the overall reliability of the models. This is based on plotting the normal distribution of the estimated residuals of the model. The plot of normality from the histogram for the model is presented in Figure 4.11. The results from the plot suggest that the residuals of the estimates are well

concentrated at the middle. The Jarque-Bera tests of normality also fail the significance test at the 5 percent level. This shows that the null hypothesis of normal distribution of the residuals cannot be rejected. Thus, it is shown that the estimates used in the analysis are well specified and stable for long run implications.

Fig 4.11: Histogram Plots for Testing Normality of Residuals

Real GDP

Inflation Rate



Conclusion

In this study, the relationship between budget deficit and economic growth in Nigeria was examined. It is argued that performance and outcomes of public sector budgets significantly spill over to macroeconomic aggregates in the country over time. The public budget in Nigeria is considered in terms of deficit outcomes in order to indicate efficiency of budgets in Nigeria. Moreover, budget financing systems were considered in relation to the outcome of overall public budget in Nigeria.. Thus, the study evaluated how t budget outcomes affect economic growth, A dynamic framework is devised for the study where the autoregressive distributed lags (ARDL) approach was adopted for the empirical analysis. This implies that both the short run and long run relationships were estimated in the empirical analysis of the study. Data used for the study were annual data covering the period of 1970 to 2024. Based on the outcome of the study it was

confirmed that budget deficit have positive effect on real GDP and hence significantly improve economic growth in Nigeria..

Recommendations

1. The positive impact of budget spending on economic growth implies that productivity of deficit spending needs to be paramount in the budget system in Nigeria. It is recommended that the efficiency of public spending needs to enhanced in Nigeria. This involves a more efficient allocation of deficit spending among optimal sectors in the economy.
2. The extensive effect of budget deficits on the economy also requires that fiscal sustainability be ensured over time in Nigeria. The medium-term fiscal framework that forms the foundations of national budget need to be fully implemented in each budget cycle. Regular fiscal audits and transparent budgeting can ensure deficits remain sustainable while delivering economic benefits.

3. It is suggested that in order to optimize economic growth, policymakers need to strategically use fiscal deficits to boost GDP..

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