Int. j. adv. multidisc. res. stud. 2023; 3(2):401-408

Received: 02-02-2023
Accepted: 11-03-2023

International Journal of Advanced Multidisciplinary Research and Studies

ISSN: 2583-049X

Causal Relationship between Fiscal Responsibility Act and Economic Growth of Nigeria (1997-2021)

[1] Dr. Chukwu Kenechukwu Origin, [2] Dr. Ngini Sufficiency Obiomachukwu, [3] Dr. Emmanuel Nwanmuoh, [4] Dr. Elechi Sarah Jeff-anyeneh, [5] Akunna Chika Rachael

[1, 2, 3, 4, 5] Department of Banking and Finance, Nnamdi Azikiwe University, Awka, Nigeria

Corresponding Author: **Dr. Chukwu Kenechukwu Origin**

Abstract

This study investigated the causal relationship between fiscal responsibility Act and economic growth of Nigeria (1997-2021) using secondary data from Statistical bulletin of Central Bank of Nigeria. The research work used the Granger Causality techniques to test the causal relationship between the independent variables (Total debt outstanding, total savings, retain revenue and total debt service payment) on the dependent variable (gross domestic product) while VAR was used to test the short run relationship. The study found that fiscal responsibility Act granger causes Nigeria economic growth within the period of the study. The study therefore advocates that Government should amend the Act in order to close the loopholes in the Act that have allowed corruption to thrive in the public sector. Nigerian Government should include the mechanisms for sanctioning operators in the public sector who violate the law. Nigerian government must also improve its revenue and close loopholes in revenue leakage, particularly with regard to the country's oil theft. Also, government should increase its tax revenue once more, by taxing the wealthy in proportion to their wealth while bringing in more informal sector in the tax bracket.

Keywords: Fiscal Responsibility Act, GDP

1. Introduction

The significance of debt in capital formation and the economy as a whole cannot be overstated. Debt, in and of itself, may not be a bad thing. However, it is contingent on how the funds raised through borrowings are used. If the majority of the revenue generated by borrowing is used for capital formation, future generations' real income may increase, allowing the government to offset its debt in the future. Using borrowed funds to fund only current expenditures, as is common in Nigeria, raises the risk of debt reaching unsustainable levels. A debtor country is concerned because of unsustainable debt. Unsustainable debt will erode creditors' confidence in the debtor country's ability to repay the debts, potentially causing further lending to be suspended. If creditors are willing to extend additional credit, it may be subject to conditions such as higher risk premiums, tax increases, and even currency depreciation, which may result in lower domestic savings, capital flight, and, eventually, a financial or balance-of-payments crisis.

In Nigeria, rising debt profile of the country has been a major concern to policy makers and Nigerians at large. Nigeria total debt outstanding and debt service payment as of 2021 was N27669.80 and N4,221.65 indicating a 4.6% and 1.62% increase in total debt outstanding and debt service payment from 1997 to 2021(DMO, 2021). The Nigeria rising debt stocks suggests a nation in emergency and undisciplined in the use of available resources. The history of Nigeria's huge debts can hardly be separated from its decades of misrule and the continued recklessness of its rulers coupled with fluctuations in oil revenue. Umeora (2013) [22] observed that the bloating of government bureaucracy, among other things, has resulted in persistent annual deficits over the years. However, a major issue is the country's reliance on oil, which has a negative impact on revenue projections every time the oil price falls. According to Wosowei (2013) [23], Nigeria has been trapped in a deficit trap since the early 1980s, when the global oil market collapsed. From a historical standpoint, the growth of government deficits in Nigeria was more pronounced after the civil war in 1970, which is consistent with Reinhart and Rogoff's (2010) observation that wars are among the causes of rising debt in most countries. In 2005 Paris Club granted the country debt forgiveness, reducing her total debt by 59% between 2004 and 2006, to N2.533 billion and N451.5 billion, respectively. Prior to the $18 billion debt cancellation granted to Nigeria in 2005 by the Paris Club, the country had external debt of close to $40 billion with over $30 billion of the amount being owed to Paris Club alone.

After the debt forgiveness granted to Nigeria in 2005 and 2006, Nigeria total debt was N2608.53 billion in 2007 which

indicates that after the debt cancellation Nigeria debt has been increasing and this necessitated the signing of fiscal responsibility Act in 2007. The Fiscal responsibility Act (FRA) was initiated as an executive bill by the former president of Nigeria, President Olusegun Obasanjo in 2004 and signed into law by the Late President Umaru Musa, Yaradua, in 2007. The government desired it as a platform to fast-track economic and human capital growth and development in sustainable manner. Fiscal responsibility is designed ultimately for capital formation (Okonkwo & Nnamocha 2010), and consolidation thereby reducing the budget deficit and minimizing debt accumulation through a more diligent revenue generation, allocation and prudent management.

Despite the enactment of fiscal responsibility Act, Nigeria's economy seems not to be responding positively. Nigeria debt profile, poverty rate and unemployment rate has been increasing it therefore becomes pertinent to examine the causal relationship between FRA and Nigeria economy by looking at the key area the Act covers such as revenue (retain revenue and total savings) and expenditure (total debt outstanding and total debt service payment) while employing Granger causality test to ascertain the direction of such relationship. This article's content is divided into segments. Section one provided a thorough introduction, and Section two reviewed pertinent literature. Theoretical framework for the third section. Section four described in detail the methodology used. Sections five, results and explanation of the data analysis's and section six, the study's conclusion and its implications for policy, follow.

2. Literature Review

FRA targets fiscal consolidation, and capital formation, which will ultimately reduce drastically unnecessary expenditure enhancing savings for productive investment, private sector development, employment generation, increase in per capita income, and general and continuous improvement of the people's overall wellbeing. The Act in pursuit of fiscal consolidation and capital formation demands that the National House of Assembly (NASS) shall set limits to further borrowing on various arms of the Government until each tier's indebtedness is drastically reduced to the barest minimum. The Act further demands that the government agency seeking borrowing should state categorically the necessary condition that will justify and necessitate such borrowing; for the legislature to approve loans it must confirm that such loans are generated based on the approved medium-term expenditure framework. The Act places a restriction on the Central Bank of Nigeria (CBN) from lending to government while the commercial banks were mandated not to lend to any government that has exceeded the limit of its approved consolidated debt unless and until the excess is redeemed completely or paid off. The fiscal responsibility commission (FRC) is a creation of the FRA not only to enforce and monitor the implementation of the Act, but is also to verify that all tiers of government and government ministries and agencies comply with the approved limits of consolidated cost and comply with the conditions for obtaining loans, and verification is done quarterly.

India and Brazil provide standard best practices as well as international good practice and model of fiscal responsibility. According to Ezeabasili and Herbert (2013) [7] the FRA of Nigeria was modeled after that of India and Brazil with under listed characteristics regarding public debt management:

- Stabilization of the total public debt which will subsequently grow slowly as the real gross domestic product (RGDP) increases.
- Drastic fall in the real debt significance for the economy.
- Continuous decline of the National debt to Real Gross Domestics product (RGDP).
- Drastic reduction of the debt (the cost of debt servicing relative to the total revenue and expenditure).

Debt management is another crucial task to ensure efficient fiscal operations. The debt management office (DMO) Nigeria is a government agency in office of the Presidency established to centrally coordinate the management of Nigeria's domestic and external debts. It has primary charge of managing the public debt in Nigeria, maintaining a comprehensive, reliable and most current electronic data base of internal and external public debt and guarantee public access to such information (Aliyu, 2010) [4]. The office has recently issued out a National Debt Management framework (NDMF): 2018-2022. The NDMF is a reference document as well as a compendium of Nigeria's key debt management policies, strategies and frameworks. The document is designed to ensure that government's borrowing activities are conducted in accordance with statutory provisions and regulations, as well as international best practices.

Nigeria is counted among the nations with high incidence of corruption evidenced by increasing poverty level in spite of abundant natural and human resources. For instance, the IMF (2018) [8] observed that in countries with weak institutional quality, governments may use capital spending as a vehicle for rent-seeking leading to inefficient public investment (Albino-War *et al*, 2014) [3]. Investment efficiency is likely to be lower as a result, because project and contractor selection is less likely to be merit-based, and the cost of projects is inflated based on improper procurement processes. In Nigeria, about one fourth of firms are expected to pay a bribe to secure a government contract, compared to one third in sub-Saharan Africa and even higher numbers in some emerging and developing countries.

IMF (2018) [8] affirmed that income inequality and poverty rates are high in Nigeria, with the latter having declined more slowly compared to other countries. At the same time, moving closer to achieving the sustainable development goals and addressing Nigeria's large development needs will require additional financing. The question that follows is can it be said that the FRA has not abetted the fiscal indiscipline observed in the management of the Nation's economy? This work therefore seeks to ascertain the effect of fiscal responsibility Acts on Nigerian economy.

The Organisation for Economic Co-operations and Developments (OECD) defines GDP as "an aggregate measure of production equal to the sum of the gross values added of all resident, institutional units engaged in production (plus any taxes, and minus any subsidies, on products not included in the value of their outputs)." GDP by Industry can also measure the relative contribution of an industry sector. This is possible because GDP is a measure of 'value added' rather than sales; it adds each firm's value added (the value of its output minus the value of goods that are used up in producing it). For example, a firm buys steel and adds value to it by producing a car; double counting

would occur if GDP added together the value of the steel and the value of the car. Gross output (GO) measures sales at all stages of production and therefore involves some degree of "double counting." Because it is based on value added, GDP also increases when an enterprise reduces its use of materials or other resources ('intermediate consumption') to produce the same output. The more familiar use of GDP estimates is to calculate the growth of the economy from year to year (and recently from quarter to quarter). The pattern of GDP growth is held to indicate the success or failure of economic policy and to determine whether an economy is 'in recession'.

3. Theoretical Framework

3.1 Keynesian Theory

Keynesianism economic theories were developed primarily in the 1930's by Keynes during the great depression. Keynesianism overturned the older ideas of neoclassical economics and was widely adopted by leading western economies after the Second World War. His theories propose that governments are obligated to use monetary policy (meaning money supply) and fiscal policy (meaning government spending) to alter the economy from how it would otherwise behave. He strongly supported government borrowing as a way to solve unemployment and provided the theoretical basis under which sovereign debt has grown to its current levels. Keynes contended that a general glut would occur when aggregate demand for goods was insufficient leading to an economic down turn with unnecessarily high unemployment and losses of potential output. In such a situation, government policies could be used to increase aggregate demand, thus increasing economic activity and reducing unemployment and deflation. Keynes argued that the solution to economic recession was to stimulate the economy (inducement to invest) through some combination of two approaches, a reduction in interest rate and increased government investment in infrastructure. Furthermore, blinder (2002) [5] claimed that investment by government to inject money which results in more spending in the general economy, which in turn stimulates more production and investment, will still involve more income and spending and so forth. The initial stimulation starts a case code of events, whose total increase in economic activity is a multiple of the original investment.

3.2 Neoclassical Growth Theory

The neoclassical theory of growth is a building of the classical growth theory used before Keynes and his followers. The basic neoclassical growth model was developed by Solow-Swan (1956) [20]. The model suggested that the Keynes variable in growth as labour productivity; output per workers i.e., how much an average worker in the economy is able to produce. This model assumes that output (Y) is produced using technology (A), physical capital (K) and labour (L). This relationship can be written as follows: Y=f (A), K, L). according to this model, the role of technological change become crucial, even more important than the accumulation of capital from the equation, Y is aggregate output, A is a number based on the current state of technology, K is a quantitative measure of the size of the stock of manufactures capital and L the quantity of labour used during the period of time K, And L are the only factors of production explicitly included in the model. An increase in growth output results from increase in production factors (physical capital & labour) and productivity which rises as a result of technological change, including changes in organization and practices.

According to Ntshakala (2015) [11], the model has three important predictions; first, increasing capital relative to labour creates economic growth since people can be more productive given more capital. Second, poor countries with less capital per person will grow faster because each investment in capital will produce a higher return than rich countries with ample capital. Thirdly, because of diminishing returns to capital, economies will eventually reach a point of which any increase in capital will no longer create economic growth. This point is called "steady state" an increase in government expenditure means that there has been an increase in government acquisition of goods and service for current and future use.

However, the increase is justified if it emanated from an improvement in health services and education as they are believed to be the most important investments in human capital. This study will tend to adopt this theory considering the fact if public debt is borrowed for financing education, health and development projects and it is considered to be productive and expected to positively contribute to economic growth through improved capital, labour and technology. This will result to an increase in government spending.

3.3 Empirical Review

Oke and Suleiman (2012) [14] adopted the debt-cum-growth model in their study of external debt, economic growth and investment in Nigeria. The result of their analysis indicates that there exists a positive relationship between external debt, economic growth and investment; this was confirmed by the coefficient determination (R^2) of about 79.8%. They concluded that the current debt ratio to GDP stimulates growth in the short term, while the private investment which is a measure of real and tangible development shoes a decline.

Oyovwi (2013) [18] studied the external debt and its impact on growth, using major macroeconomic variables in Nigeria. The study used the econometric method of co-integration technique to establish the quantitative impact and relative significance of the explanatory variables. The study shows that there exists a long run relationship among the major macroeconomic variables. The study concluded that external debt burden, foreign direct investment, inflation and export have a positive relationship with economic growth.

Onodugo and Amujiri (2015) [16] made a detailed study of the fiscal responsibility Act; towards achieving fiscal responsibility for sustainable development in Nigeria: A contextual insight. The study analyzed the flaws in Nigeria "public financial management that impede economic development as well as the imperatives of the fiscal responsibility law in Nigeria. The study concluded that strict adherence to the fiscal policy law is bound to promote macroeconomic stability in Nigeria if strictly adherent to.

Obademi (2013) [12] carried out an analytical study of the topic; external debt and Nigeria Economic growth nexus, matters arising. The study applied an empirical analysis of the least square method. The empirical results via the parameters estimates reveals that external debt and service have negative and positive influence respectively, though the external debt estimates were not too strong on economic

growth.

Egbetunde (2012) [6] studied Public Debt and Economic Growth in Nigeria; Evidence from Granger causality using Vector Auto Regression (VAR) model. The result showed that the variables used in the study are stationary at first differencing, co-integration test was also performed and the result show that public debt and economic growth have long run relationship. If the government is sincere with the loan obtained and used it for the development of the economy rather than channel the funds to their personal benefits.

Ajayi and Ojo (2012) [2] investigated the effect of the external debt burden on economic growth and development in Nigeria using regression analysis of ordinary least square method. Their findings indicates that external debt burden had adverse effect on the national income and per capital income of the nation; High level of external debt leads to devaluation of the nation's currency, increase in retrenchment of workers, continuous industrial strike and poor educational system. This led to the economy of Nigerian getting depressed.

Osuala and Ebieri (2014) made a research on the empirical analysis of the impact of fiscal policy on economic growth of Nigeria. The study employed ordinary least square method of multivariate regression in analyzing the log-linearized model. The augment Dickey-Fuller unit root test was applied to establish the stationarity of the variable while the general to specific approach to auto regressive distributed lag. ARDL model was used for testing the existence long run or short run equilibrium condition. The findings were that, there is evidence of long run equilibrium relationship between fiscal policy and economic growth in Nigeria during the period.

Ogunmuyiwa (2010) [13] examined whether external debt actually promotes economic growth in developing countries using Nigeria as a case study. Time series were fitted into the regression equation using various econometric techniques such as Augmented Dickey fuller (ADF) test Granger causality test, Johansen co-integration tested vector Error Correction Method (ECM). Empirical results revealed that causality does not exist between external debt and economic growth as causation between debt and growth was also found to be weak and insignificant in Nigeria.

Udeh, Ike and Onuka (2016) carried out a research work aimed at ascertaining the impact of external debt on economic growth in Nigeria. Data were analyzed using ordinary least square diagnostic tests were conducted using Augmented Dick fuller unit root test, co-integration and error correction model. It was discovered that external debt had a positive relationship with gross domestic product at short run but a negative relationship at the long run. Also, while the external debt service payment had negative relationship with gross domestic product, exchange rate had a positive relationship with it. Conclusively, exchange rate fluctuation had positive impact on the Nigeria economy while external debt stock and debt service payment had negative impact on the same economy.

Agu, Okwo, Ugwunta and Idike (2015) [1] studied the impacts of various components of fiscal policy on the Nigerian economy descriptive statistics were employed to show the contribution of government fiscal policy on economic growth and ordinary least square in multiple form was also used to ascertain the relationship between economic growth and government expenditure components after ensuring date stationarity. Findings reveal that total government expenditures tend to increase with government revenue, with expenditure speaking faster than revenue. Investment expenditures were much lower than recurrent expenditures evidencing the poor growth in the country's economy therefore, in the public spending, it is important to note that the effectiveness of the private sector depends on the stability and predictability of the public incentive framework, which promotes or crowds out private investment.

Ndan (2013) [10] studied fiscal responsibility and repositioning of Nigeria budgeting process and outcomes covering the period 2007 – 2013 and concluded that the success of any fiscal responsibility frame work depends on appropriate design consistency in public financial management, regulations and enforcement of their provisions.

4. Methodology

The study made use of time series data from the Central Bank of Nigeria (CBN) statistical bulletin spanning the years 1997 to 2021. The model of Ibrahim *et al.* (2016), which investigated the sustainability of domestic debt in Nigeria: An ARDL bounds testing co-integration approach, is adopted and modified in this study. His model is stated as follows:

$$DD = F(OR, NOR, TR, TX) \quad (1)$$

Where DD is Domestic debt, OR is Oil revenue, NOR is Non-oil revenue, TX is Total expenditure, TR is Total Revenue. Since this study examined the effect of fiscal responsibility Act on Nigerian economy, DD was be replaced by RGDP; TSS and RR were included in this study while OR, NOR and TX were removed.

The general form of the modified model is expressed as follows;

Mathematically the models can be stated as:

$$RGDP = \int (TDO, TSS, RR, TDSP) \quad (2)$$

$$RGDP = \beta_0 + \beta_1 TDO + \beta_2 TSS + \beta_3 RR + \beta_4 TDSP + Ut \quad (3)$$

Where;

RGDP = Real Gross Domestic Product
TDO = Total Debt Outstanding
RR = Retained Revenue
TSS = Total Savings
TDSP = Total Debt Service Payment
$\int$ = Functional Notation
μ_t = Error term
$\beta_0 - \beta_4$ = Coefficients of Estimates

5. Results and discussion

Table 1: Descriptive statistics results

Variables	Obs	Mean	Standard Dev	Min	Max	Skewness	Kurtosis
RGDP	25	56666.82	54106.40	3989.450	173527.7	0.710793	2.183092
TDO	25	5438.490	4251.707	1097.780	18366.31	1.537232	4.991160
RR	25	2586.599	1536.926	353.7200	5045.400	-0.069110	1.635128
TSS	25	7123.921	7386.818	177.6500	25648.26	0.970260	3.018463
TDSP	25	906.1710	1088.664	30.84338	4221.650	1.692634	5.078025

Source: Computer analysis using E-views 12.0

Table 1 displays the descriptive statistics results for the entire study sample. For the entire sample, the mean (or standard deviation) values for GDP, total debt outstanding, retain revenue, total savings, and total debt service payment are 56666.82, 5438.490, 2586.599, 7123.921, and 906.1710 (or 54106.40, 4251.707, 1536.926, 7386.818 and 1088.664, respectively). The maximum and minimum values for the five variables are 504.5400 and 30.84338, respectively. The skewness has both negative and positive values, indicating that the distribution is both negatively and positively skewed.

The attainment of stationarity by variable(s) is necessary in model estimation due to the influence of non-stationarity on regression output. To this effect, the Augmented Dickey-Fuller (ADF) unit root test was used to prove that the data were stationary.

Table 2: Result of ADF Unit Root Test at Level

Variables	ADF Test Statistic	Test Critical Value at 1%	Test Critical Value at 5%	Remark
RGDP	3.146142 (0.4719)	-3.737853	-2.991878	Not Stationary
TDO	-2.332347 (0.1706)	-3.737853	-2.991878	Not Stationary
RR	-0.729257 (0.8207)	-3.737853	-2.991878	Not Stationary
TSS	4.891907 (1.0000)	-3.737853	-2.991878	Not Stationary
TDSP	8.834107 (1.0000)	-3.737853	-2.991878	Not Stationary

Source: Author's Computation

Table 3: Result of ADF Unit Root Test at 1st Diff

Variables	ADF Test Statistic	Test Critical Value at 1%	Test Critical Value at 5%	Remark
RGDP	-3.570081(0.0024) **	-3.752946	-2.998064	Stationary
TDO	-5.041358 (0.0005) **	-3.752946	-2.998064	Stationary
RR	-8.313909 (0.0000) **	-3.752946	-2.998064	Stationary
TSS	-2.176642(0.2193)	-3.752946	-2.998064	Not Stationary
TDSP	-0.175476 (0.9289)	-3.752946	-2.998064	Not Stationary

Source: Author's Computation

Table 4: Result of ADF Unit Root Test at 2nd Diff

Variables	ADF Test Statistic	Test Critical Value at 1%	Test Critical Value at 5%	Remark
RGDP	-7.452140(0.0000) **	-3.769597	-3.004861	Stationary
TDO	-7.578334 (0.0000) **	-3.769597	-3.004861	Stationary
RR	-11.85306 (0.0000) **	-3.769597	-3.004861	Stationary
TSS	-8.731388 (0.0000) **	-3.769597	-3.004861	Stationary
TDSP	-5.914981 (0.0001) **	-3.769597	-3.004861	Stationary

Source: Author's Computation

The Augmented Dickey-Fuller (ADF) unit root text in Tables 2, 3, and 4 indicates that none of the variables were stationary at level, implying that the variables should be differentiated further. Only RGDP, TDO, and RR were stationary at the first difference, according to Table 3. Table 4 shows that at the second difference, all variables were stationary. This is due to the fact that their ADF test statistic value is greater than the Mackinnon critical value of 5% in absolute terms. As a result, the vector autoregression estimation (VAR) method of data analysis was required.

Co-Integration Text

Table 5: Presentation of Johansen Co-Integration Result

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.861722	104.1439	69.81889	0.0000
At most 1 *	0.647214	58.63864	47.85613	0.0034
At most 2 *	0.634662	34.67510	29.79707	0.0298
At most 3	0.392927	11.51563	15.49471	0.1378
At most 4	0.001572	0.036173	3.841465	0.5140

Source: Co-integration result computed (see appendix)

*(**) Denotes rejection of hypothesis @ 5% significant level

L.R. test indicates 3 co-integrating equation @ 5% significant level

The co-integration test is used in the determination of the long-run relationship that exists between variables. Table 5 shows that long-run relationship (co-integration) exists among the variables. There is 3 cointegrating equation in the model. This is reflected in the trace statistic of Table 5 which shows a value greater than that of the 5% critical value respectively. With the existence of long run relationship, there is need to analyze normalized long run coefficients based on Johansen test. The result of the normalized coefficients shown in Table 5 shows a long-run relationship between fiscal responsibility Act and economic growth of Nigeria.

Table 6: Normalized long-run coefficient based on Johansen test

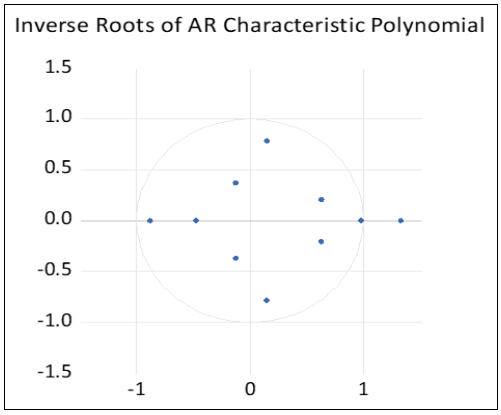
Dependent variable RGDP				
RGDP	TDO	RR	TSS	TDSP
1.000000	-5.445476	0.212203	-2.656447	34.87554
	(0.88462)	(7.59296)	(3.82855)	(20.5171)
	[-6.155]	[0.028]	[-0.693]	[1.699]

Source: Output Data from E-views 12.0

Note: Standard errors in ( ) and t- statistic in [ ]. ** implies significant at 1% level of significant. In long run TDSP and RR have positive effect on Gross Domestic Product while TSS and TDO have negative effect on RGDP. The coefficients of TDO and TDSP are statistically significant at the 1% level. Conclusion: The null hypothesis of no cointegration is rejected against the alternative of cointegrating relationship in the model. The nonstationary of data series and the cointegration of the vector variable in the equations lead to the execution of the second phase of Vector Autoregression Estimate (VAR). But before we carry out the analysis using VAR there is need for the researcher to carry out the diagnostic text to make sure that the regression model is correctly specified in terms of the regressors that have been included.

Diagnostic Test

Stability Test



Source: Graphs Using E-view Statistical Package, Version 12

Fig 1: Inverse Root of AR Characteristics Polynomia

The stability of the VAR model was investigated using the inverse roots of AR characteristic polynomial presented in Fig 1.

The result shows that the VAR is relatively stable since all dots are within the circle except one. The reverse would be the case if the dots lie outside of the circled region.

VAR Residual Heteroskedasticity Tests

To test for heteroskedasticity among the residuals, the Levels and Squares joint test was conducted and the results is presented in Table 7.

Table 7: VAR Residual Heteroskedasticity Tests (Levels and Squares)

Joint test:			
Chi-sq	df	Prob.	
313.1842	300	0.2885	

Source: Output Data from E-views 12.0

The joint test of the VAR residual heteroscedasticity test show that there are equal variances among the residuals in the VAR model given that the probability value of the test statistic (Chi.sq) is greater than 0.05 which implied the acceptance of the null hypothesis of absence of heteroskedasticity.

Vector Autoregressive Estimates

Table 8: Results of Vector Autoregressive Estimates Normalised on RGDP

Parameters	Coefficient	Standard Error	t-statistic
RGDP(-1)	0.463047	0.29236	1.58384
TDO(-1)	0.530301	0.62169	0.85300
RR(-1)	-0.958209	3.11864	-0.30725
TSS(-1)	2.156205	2.79076	0.77626
TDSP(-1)	-2.274255	11.9028	-0.19107
C	-3866.079	4750.41	-0.81384

Source: Output Data from E-views 12.0
Adjusted R-squared = 0.99, F-Statistic = 210.5482

Table 8 revealed that RGDP, TDO, and TSS have a positive effect on RGDP while RR, TDSP, and C have a negative effect on RGDP. A 1% change in the one-year lag of RGDP, TDO, and TSS results in a 0.46 percent, 0.53 percent, and 2.156 percent increase in RGDP, respectively. A one-percentage-point change in the one-year lag of RR, TDSP, and C, on the other hand, results in a negative change in RGDP of -0.958 percent, -2.27 percent, and -3866.07 percent, respectively. In terms of individual variable performance, the results show that none of the variables were statistically significant.

The findings revealed that the Fiscal Responsibility Act will have a positive effect on Nigeria's economic growth, but the effect was insignificant during the study period. The insignificant effect demonstrated that the Act did not meet the desired objective that necessitated its existence due to mismanagement, unpatriotic, and human character-deficiency approaches to infrastructure development among those entrusted with the nation's governance.

The adjusted R-squared value of 0.99% indicates that the combined effect of the independent variables explains approximately 99% of the variations in RGDP. It also implies that the model explains the relationship well. Similarly, the F-statistic, which measures the overall significance of the model, revealed a high value of 210.5482, indicating that the effect of the Fiscal Responsibility Act on economic growth in Nigeria is statistically significant.

Table 9: Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
TDO does not Granger Cause RGDP	23	0.02953	0.9710
RGDP does not Granger Cause TDO		0.03182	0.9687
RR does not Granger Cause RGDP	23	3.42427	0.0549
RGDP does not Granger Cause RR		0.13891	0.8712
TSS does not Granger Cause RGDP	23	4.64192	0.0237
RGDP does not Granger Cause TSS		1.00272	0.3865
TDSP does not Granger Cause RGDP	23	0.14644	0.8648
RGDP does not Granger Cause TDSP		0.17589	0.8401

Source: Output Data from E-views 12.0

The probability value of less than 5% significance level in Table 9 indicates a unidirectional causality between TSS and RGDP with causality moving from TSS to RGDP. The result shows that total savings granger causes gross domestic product meaning that retain revenue will help Nigeria finance its social and physical infrastructure required for sustainable development.

6. Conclusion and policy implications

The Fiscal Responsibility Act was expected to ensure economic growth by efficiently utilizing borrowed funds in critical sectors of the economy while reducing public debt to a prudent level; therefore, it is necessary to investigate the causal relationship between the Fiscal Responsibility Act and Nigerian economic growth. As such, the purpose of this paper was to look into the causal relationship between the Fiscal Responsibility Act (total debt outstanding, retained revenue, total savings, and total debt service payment) and Nigerian economic growth (GDP) from 1997 to 2021.

To achieve the study's objectives, the data was analyzed using the Johansen co-integration test, the vector autoregressive (VAR) model, and the Granger causality test. The unit root test of the Augmented Dickey-Fuller test was used to examine the unit root properties of the series, and the results show that all variables became stationary only after the second differencing. This resulted in the use of the Johansen cointegration test in testing for long-run relationships or cointegration, which revealed a long-run relationship between the Fiscal Responsibility Act and GDP. The Granger Causality Test, which was used to investigate the causal relationship, shows that total savings and gross domestic product have a unidirectional relationship. As a result of the study's findings that the Fiscal Responsibility Act is capable of ensuring Nigeria's economic growth, the following recommendations are made to make the Act more effective in the country: There is a need to amend the Act in order to close the loopholes in the Act that have allowed corruption to thrive in the public sector, robbing the country of vast sums that would have otherwise been available to address development challenges and improve the human condition. As a result of the Act's loopholes, various governments are vulnerable to massive looting and have unrestricted freedom to engage in frivolous domestic and foreign public debt accumulation. This laxity has spread to government ministries, departments, and agencies (MDAs), where remittances of generated funds are rarely made, as is the case with the Federation Account. The Act should include mechanisms for sanctioning operators in the public sector who violate the law. Despite the fact that the Act identified approximately 50 offenses or violations, it did not include any provisions for punishment for any default. Due to a lack of enforcement mechanisms, it has become a toothless bulldog. Because public debt accumulation has intergenerational consequences, the Act should establish a debt limit for the federal government and the states. Traditionally, public debt accumulation criteria have included, among other things, the ratio of total debt to GDP as well as the proportion of total revenue dedicated to debt service payments. Without the effectiveness of the fiscal responsibility law, policymakers have repeatedly claimed that Nigeria is largely under-borrowed and thus has more room for debt accumulation because the country's debt-to-GDP ratio is within the globally acceptable range of less than 40%. This has been criticized several times by economic experts, who argue that while the country's debt-to-GDP ratio appears healthy, GDP does not pay debt and that the most important factor in this critical period in the country's history should be the country's ability to service its debt with current revenue. The Nigerian government must also improve its revenue and close loopholes in revenue leakage, particularly with regard to the country's oil theft. The government should increase its tax revenue once more, given that Nigeria is currently undertaxed in comparison to other African countries. This does not necessarily imply imposing new taxes on those who are already paying them, but rather taxing the wealthy in proportion to their wealth. Many wealthy people, as well as a large portion of the informal sector, do not pay their fair share of taxes. This will invariably result in a sizable increase in government revenue.

7. References

1. Agu SU, Okwo IM, Ugwunta OD, Idike A. Fiscal policy and economic growth in Nigeria, SAGE Open. 2015; 7(1):1-14.
2. Ajayi LB, Oke MO. Effects of external debt on economic growth and development of Nigeria. International journal of Business and Social Sciences. 2012; 3(12):297-307.
3. Albino-War MF, Cerovic F, Grigoli JC, Flores J, Kapsoli H, Qu Y, *et al*. Making the Most of Public Investment in MENA and CCA Oil-Exporting Countries. IMF Staff Discussion Note. Paper 14/10. International Monetary Fund, Washington, DC, 2014.
4. Aliyu JY. Debt management in Nigeria; fiscal responsibility and public debt. Adhoc committee on investigation into foreign loans obtained by both the Federal and State governments in Abuja, 2010.
5. Blinder AS. Through the looking glass: Central Bank transparency. Working Papers 116, Princeton University, Department of Economics, Center for Economic Policy Studies, 2002.
6. Egbetunde T. Public debt and economic growth in Nigeria: evidence from cirorger causality. American Journal of Economics. 2012; 2(6):101-106.
7. Ezeabasili VN, Herbert WE. Fiscal responsibility law, fiscal discipline and macroeconomic stability: lessons from Brazil and Nigeria. International Journal Economics and Management Sciences. 2013; 2(6):1-10.
8. IMF. Strengthening Transparency and Governance in Nigeria. IMF Country Report No. 18/64. Washington DC: International Monetary Fund, 2018a.
9. IMF. Distributional Impact of Fiscal Reforms in Nigeria. IMF Country Report No. 18/64. Washington DC: International Monetary Fund, 2018b.

10. Ndan JD. Fiscal responsibility and repositioning of Nigeria budgetary process and outcomes. ABU Journal of Public Administration. 2013; 2(2):78-89.
11. Ntshaktala PL. Effects of public debt in economic growth of Swaziland. International Journal of Business and Commerce. 2015; 5(1):1-25.
12. Obademi OE. External debt and Nigeria economic growth nexus, matters arising. Journal of Poverty, Investment and Development. 2013; 1(1):22-28.
13. Ogunmuyiwa MS. Does external debt promote economic growth in Nigeria? Current Research Journal of Economic Theory. 2010; 3(1):29-35.
14. Oke MO, Suleiman LA. External debt, economic growth: An assessment of macro-economic variables in Nigeria. European Journal of Business and Management. 2012; 1(11):67-75.
15. Okonkwo ON, Nnamocha PN. Government fiscal strategy and sustainable fiscal management in Nigeria. Journal of Development Economics. 2014; 17(5):15-165.
16. Onodugo IA, Amujiri B. towards achieving fiscal responsibility for sustainable development in Nigeria: A contextual insight. International Journal for Innovative Science, Engineering and Technology. 2015; 2(5):476-484.
17. Osuala AE, Ebieri J. Empirical analysis of the impact of fiscal policy on economic growth of Nigeria. International Journal of Economics and Finance. 2016; 6(3):203-225.
18. Oyovwi DO. External debt burden and its impact on growth and investment in Nigeria management. Academic Journal of Inter Disciplinary Studies. 2013; 2(2):221-235.
19. Reinhort CM, Reinhort VR, Rogoff KS. External debt and gross domestic product in Bangladesh: A Co-integrated analysis. Management Research and Practice. 2012; 4(2):28-36.
20. Solow RM. A contribution to the geory of economic growth. Quarterly Journal of Economics. 1956; 70(1):65-94.
21. Udeh SN, Ugwu JI, Onwuka IO. External debt and economic growth: The Nigeria experience, European Journal of Accounting Auditing and Finance Research. 2016; 4(2):33-48.
22. Umeora CE. An analysis of the relationship between fiscal deficits and selected macroeconomic variables in Nigeria. Journal of Business and Management. 2013; 12(6):19-27.
23. Wosowei E. Fiscal deficits and macroeconomic aggregates in Nigeria. Kuwait Chapter of Arabian Journal of Business and Management Review. 2013; 2(9):72-82.