# Domestic Debt and Economic Growth in Nigeria: Empirical Evidence from 1981 to 2021

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#### Abstract

This study examines the impact of domestic debt on economic growth in Nigeria using annual data from 1981 to 2021. The model for the work was built using the Neoclassical growth theory and Harrod Domar model; which poses as a motivation to this study. The study adopted the autoregressive redistributed lag model (ARDL), which shows that there is a long-run relationship between domestic debt and economic growth. Data for the study was sourced from the Central Bank of Nigeria's statistical bulletin (2022), the World Bank (2022) and Debt Management Database (2022). The variables of the model include; interest rate, federal government debt, state government debt, Treasury bill and total savings, as independent variables, while economic growth as dependent. The findings revealed that state government debt, treasury bills and total savings had a significant impact on economic growth for the period under review in Nigeria. Based on the findings, the study recommends that Government should ensure proper, efficient and effective use of both state and federal government borrowings, and money raise from treasury bills sales. This would help to provide the basic infrastructures needed for investments to thrive, and as such, the economy will grow.

*Keywords*: Domestic Debt, State Government Debt, Interest Rate, Federal Government Debt Multiple regression method

#### Introduction

Debt management now belongs to monetary policy as part of general macro-economic policy of the state administered by the monetary authorities (Emerenini & Anyanwu 2015)

It is the desire of every developing country to attain maximum level of economic growth at the long run. The Nigerian economy is one of the largest in Africa; since the late 1960s, her main stay has been on petroleum. The Nigerian economy is termed a middle income, mixed economy and emerging market with expanding manufacturing, communications and entertainment sectors (Duntoye 2020). Economic growth is the most powerful instrument for reducing poverty and improving the quality of life in developing countries (Besley & Cord 2007). Nigeria's economic potential is constrained by many structural issues, including inadequate infrastructure, tariff and non-tariff barriers to trade. Between 2000 and 2014, Nigeria's economy experienced broad-based and sustained growth of over 7% annually averages, benefitting from favourable global conditions and macroeconomic reforms (Nosakhare 2014). However, from 2015-2022 growth rate decreased and GDP per capita flattened, this was driven by monetary and exchange rate policy distortions, increasing fiscal deficits due to lower oil production and a costly fuel subsidy program.

The total amount of money owed by an individual, company or other organization to banks or other lenders is called "debt". It represents the accumulated total of past borrowing. The concept of debt is as old as an economy. This simply means the concept of debt and credit has been existing even before the introduction of coins. Debt in Nigeria like that of other African countries appears to be ceaseless and, on the increase, that is; the more we pay, the more it seems we owe. Debt has eaten so deep into the Nigerian economy that it has compromised her growth and development economically, socially, and otherwise (Abdulkarim 2023).

Currently, debt service accounts for nearly one-third of Nigeria's budget (three times the country's sectorial spending for education and nine times its budget for health) (Debt Management Office 2018). Since 1980, debt has been broadly reversed with service rising from 1.9% to 8% of GNP. Nigeria is only paying little over half its scheduled debt service (CBN statistical bulletin 2021). (Oyejide, Soyede & Kayode 2004) described it as a resource or money that is used in an organization but is provided by its owner and does not in any way belong to them. A financial instrument or other formal equivalent is used to represent this liability.

Countries borrow for a variety of purposes, one of which is to conceal and smooth out fiscal imbalances, which may encourage investment and quicken the pace of economic growth (Adam &Bevan 2013). Contrary to all that has been mentioned above, with no evidence to support it, Nigeria's public debt appears to have grown to an extremely worrying level (Opara, Nzotta & Kanu 2021). As far as the debt profile is concerned, Nigeria has found herself in a serious problem between her financial standing and capacity for debt repayment. The debt keeps increasing and accumulating far more that the nation's capacity to repay despite the policy measures put in place to control it.

Furthermore, this issue of increased debt has led to increased level of unemployment, high inflation, over dependence on the oil sector amongst others (Onyeiwu, 2012). It is quite obvious that because of the increasing debt, Nigeria may not be able to attain the required level of economic growth without first taking into consideration the negative effects of her debt burden on the economy. Developing countries like Nigeria are urged to borrow to strengthen their meagre capital reserves, which will help close the savings-investment gap at home and promote economic growth (Opara et al, 2021). The government incurs debts by borrowing domestic investment, which can be either internal or external. Nigeria as a country will be able to accelerate her people's growth and increase their level of life if the borrowed funds are wisely reinvested and used for profitable ventures (Egbetunde 2012). We can classify debt into the following two: dead weight debt and reproductive debt. An example of a reproductive debt is money borrowed for buying a factory or a refinery; this is because it is a kind of debt that is used to purchase assets. On the other hand, a dead weight debt is a debt that is used to service or finance natural disasters e.g. war (Omodero 2020).

In 1956, Robert Solow and Trevor Swan proposed this growth idea. The theory was developed and introduced with a long-run mode of economic growth in 1956, which, starting in 1957, included changes in technology. Initially, the model's growth rate was determined by external population increases. According to the neoclassical growth theory, debt has a direct consequence on economic growth. This is because if the amount loaned is used in an optimal manner, it is expected to upturn investment. The neoclassical growth theory states that different labor and capital inputs into the production function led to short-term equilibrium. To begin with, this theory makes the assumption that three things are required for an economy to grow; the economic theory known as neoclassical growth theory describes how integrating the three forces of labor, capital, and technology leads to a stable rate of economic growth.

Secondly, an economy with the following production function is measured for equilibrium and growth using the neoclassical growth theory's production function. Y=Af(K, L) in which A is technology, K is capital, L is unskilled labor, and Y is GDP.

Furthermore, where there is strength lies some weakness and limitations. The following are some weaknesses of this theory.

First and foremost, it was claimed that this theory of economic development takes a limited and insufficient approach.

Second, they thought that economic growth is a calm, steady, and gradual process, however in history; economic development has been a discontinuous process. Also, the assumption of full employment is very unrealistic because a economy cannot true attain full employment. Nevertheless, given that the study is centred around the effect of domestic debt on economic growth, the neoclassical growth theory was able to explain how debt is directly linked to economic growth, using the three driving forces, which is an important tool employed by a growing economy. The neoclassical growth hypothesis, which provides an explanation for the factors influencing long-run growth, forms the theoretical foundation of this investigation. It is an economic theory that describes how integrating the three forces of labor, capital, and technology leads to a stable rate of economic growth. They outlined the three requirements-labor, capital, and technologyfor a developing economy. Debt and economic growth are directly correlated, according to the neoclassical theory of growth. This is merely due to the fact that it is anticipated that the borrowed cash will raise that economy's investment level as well as growth if it is used optimally, provided countries use the borrowed funds for viable investments without suffering from macroeconomic instability, policies that distort economic incentives and allow for timely debt repayment. Reducing the resources available for investment through debt servicing is the mechanism of transmission by which debts impede growth. Public debt can also be seen as an implicit tax on the resources that a country produces. Furthermore, it can burden future generations by reducing their access to private capital, which could result in higher long-term interest rates, a disincentive to make the kind of private investments that are needed to increase productivity, and a decrease in capital accumulation.

The broad objective of the thesis is to examine the impact of domestic debt on economic growth in Nigeria. The specific objectives are:

- To determine the impact of federal government debt on economic growth in Nigeria.
- To investigate the effect of state government debt on economic growth in Nigeria.
- To examine the direction of causality between government debt and economic growth in Nigeria?

The dependence by Federal government on borrowing from the banking sector mainly CBN to finance its large fiscal deficits has affected the expansion of the Nigerian economy. This study makes use of some variables while carrying out the analysis which will act as a guide. The variables are gross domestic product, federal domestic debt, state domestic debt, total saving and interest rate. This has hampered speed in the attainment of macroeconomic stability as well as economic growth. Due to the identified continuous rise in Nigeria debt profile without a visible and clear economic stability, reduction in unemployment and poverty rate, poor economic growth over the years, this study is designed to unravel how the increasing debt domestically has impacted economic growth in Nigeria. The use of Harrod-Domar model and Neo-classical growth theory were used to capture the above mentioned. Therefore, this contributes to the literature of research on domestic debt and economic growth.

The concluding part of this research paper is structured as follows:

section two reviewed relevant literature on domestic debt on economic growth. The paper moves further to present the analytical techniques in section three. Results are presented and discussed in the fourth section. The fifth section summarizes, recommends, and draws an adequate conclusion from the study.

#### 2.0 Literature Review

#### **Theoretical Discussion**

The theoretical literature on the link between domestic debt and economic growth trade is largely encapsulated in the neoclassical growth theory and harrod domar which, looked at the relationship between debt and economic growth.

Peter, Dennis, and Chukwuedo (2013) looked at the analysis of domestic debt; its implication for economic growth in Nigeria, the error correction model was employed. Their results showed that, whereas debt servicing had a negative link with GDP, domestic debt and credit had significant and positive relationships with GDP. In addition, there was a slight but positive correlation between government spending and GDP. This work failed to capture key economic growth theory.

Multiple regression models and data from 1970 to 2012 were used in Damian & Chukwunonso's (2014) empirical study, which addressed the questions of the composition and structure of domestic debt and its effect on private investment in Nigeria. The study concluded that domestic debt in Nigeria has a major detrimental effect on domestic private investment. The study also revealed that foreign private investment in Nigeria was significantly harmed by local debt, whereas foreign private investment in Nigeria was positively impacted by currency rates and debt servicing. Ewubara, Nteegah, and Okpoi (2017) studied to ascertain how public borrowing affected the expansion of the Nigerian economy between 1980 and 2015. The analysis in the study used the ARDL approach. The study's findings showed that while domestic debt severely slowed Nigeria's economy in both the short and long terms, external debt had a direct and substantial impact on growth. The overall stock of debt services was found to have a negative and minor effect on economic development, while net foreign direct investment and foreign exchange reserves had positive and substantial effects at the 5% level at lag 3. The non-significance of the error correction term suggests that economic development in Nigeria responds slowly to changes in the dynamics of public debt, despite the fact that the goodness of fit was strong and reasonable in describing variations in growth.

In a collaborative study, Akhanolu, Babajide, and Akinjare (2018) investigated the effects of public debt on economic development between 1982 and 2017. Two-stage least square regression was employed in the investigation. The outcome demonstrated that domestic debt has a favorable impact on the economy. The research is in line with Tamunonimim's (2013) study, which examined the connection between Nigeria's rate of poverty and domestic debt and discovered a long-term association between the two. Additionally, he discovered that there was a large favorable influence of domestic debt on bank credit.

On the empirical side, several studies as related to the subject matter were reviewed such as Greatness & Christian (2022); Peter et al (2013); Akhanolu et al (2018) John (2022); Ozurumba & Kanu (2014) as well as Aboudou (2010) who all agreed that direct and significant relationship exist between domestic debt and economic growth. On the other hand, John & Segun (2022); Udoka & Ogege (2013); Ibrahim & Shazida (2019) who concluded that domestic debt does not have significant impact on economic growth.

The Harrod Domar theory, which describes growth rate in terms of capital and savings levels, goes on. They held that there are three types of growth: warranted growth, actual growth, and natural rate of growth. They also claimed that there is no inherent reason why an economy would experience balanced growth.

Furthermore, as is customary in most academic research that relies on theoretical foundations to investigate physically observed phenomena (theory testing research), this study relied on the Neoclassical growth theory as well as the Harrod Domar theory. This theory was used to represent the dependent and independent variables, from which the study's hypothesis was derived. This hypothesis states that a nation's debt and economic performance are directly correlated (Benjamin et al 2020). Moreover, the theory maintained that borrowed money employed for profitable investments should have a positive effect on economic production, enabling the prompt repayment of debt, in environments where macroeconomic variables are stable and investment-promoting policies are in place. The theory was created with the idea that the three forces of labor, capital, and technology working together can lead to continuous economic growth. That is, different labor and capital inputs into the production function led to short-term equilibrium.

#### 2.1 Empirical Issues

In their investigation of Nigeria's domestic public debt and economic progress, Opara et al. (2021) used the following factors. Human Development Index; State and Federal Debt; Debt Servicing Domestically. The approach of ordinary least square estimate was utilized. There is a considerable correlation between private sector investment and debt servicing and domestic state government debt.

In Okwu et al.'s (2016) study, "Domestic debt and economic growth in Nigeria: data-based evidence," real gross domestic product, debt shock, domestic debt servicing, expenditure, government expenditure, and bank lending rates were the variables used. Multiple regression analysis models' design and methodology for time series analysis. The results showed that domestic debt has potential for both short- and long-term growth.

The impact of domestic debt on GDP growth in Nigeria was reviewed by Nestor (2020). The study used RGDP, interest rate, domestic debt, and external debt as its research variables. The analysis technique employed was the autoregressive distributed lag and the augmented dickey fuller unit root test. The study's results indicate that public debt has a noteworthy role in influencing economic growth.

Nigeria's economic growth from 1980 to 2020 was examined by Greatness & Christian (2022) in relation to the impact of domestic debt. In the study, multilinear regression was utilized, and the Johansen co-integration test was employed for the long-run analysis and the ordinary least square approach for the short-run analysis. The study employed the following variables: gross domestic product, Treasury bill, Treasury bond, and Treasury certificate. The study's conclusions showed that domestic debt has a major role in determining Nigeria's economic growth in the near term. Furthermore, a long-term correlation has been observed between Nigeria's economic growth and its level of domestic debt.

Aboudou (2010) investigated the interaction of stock market development and economic growth, using the case of West African monetary union. This relevance of this study to mine is that the stock market development is also an instrument of domestic debt. The period covered is 1995 to 2006, and a time series econometric investigation was conducted. The results show that the development of the stock market and economic growth are positively correlated.

# 3.0 Methodology

## Analytical Framework

The study's model is based on the neoclassical growth theory, which postulates that three driving forces combine to provide a stable rate of economic growth. Labor, capital, and technology are all very important for an economy to grow, according to this theory. However, they also pointed out that there is a big difference between temporary equilibrium and long-term equilibrium, the former of which does not always require any of the three driving forces. Economic growth depends heavily on the amount of capital that accumulates inside an economy and how individuals use it. Additionally, an economy's output is determined by the mix of labor and capital in that sector. An economy's equilibrium and growth are assessed using neoclassical growth theory.

Y=f(A,K,L)

Where;

- Y= Income, or the economy's Gross Domestic Product (GDP)
- K= Stock of capital
- L= Amount of unskilled labor in the economy
- A= Determinant level of technology

# 3.1 Model Specification

Koutsoyiannis (2003) stressed that understanding economic theory and being conversant with the specific phenomenon under study are prerequisites for model specification. This study adopts neoclassical growth theory with the inclusion of other variables that are relevant to this study. In this study, we utilized autoregressive distributive lag model (ARDL) to evaluate the short and long run linkages among the various variables of interest. Equation 3.1 was expanded to include other domestic debt variables that affect economic growth; thus, the functional specification of the model was specified as follows:

Econometrically, equation 3.1 can be written as;

 $GDP = \beta_0 + \beta_1 FDG_t + \beta_2 SDG_t + \beta_3 INTR_t + \beta_4 TOSA_t + \beta_5 TB_t + \beta_6 DDS_t + \mu.....3.2$ 

Where; GDP is gross domestic product FGD is federal government debt, SGD is state government debt, INTR is the rate of interest or lending rate, TOSA is the total savings or national savings, TB

is treasury bills, DDS is domestic debt servicing,  $\beta_0$ =Constant Term/Parameter Intercept,  $f_r$ =Error Term

This research span for a period of 41years (1981 to 2022). The data was sourced from the CBN Statistical Bulletin on Various Issues, the World Bank Development Indicators for Nigeria, debt management database and national bureau of statistics. The availability of data for this research was cumbersome; this is because there was a disaggregation amongst the variables of state and federal government debt, of which they were converted from nominal terms to real terms. However, with greater commitments and the sourcing of data from external sources, these limitations had no significant impact on the quality of the study.

# **3.2 Estimation Procedure(s)**

The time series data which is subject to stationarity were used for this study. A descriptive statistic of the variables served as the basis for the analysis. The augmented dickey fuller (ADF) test was carried to determine the variables unit root properties.

Given the sequence in which the variables are integrated, the Johansen co-integration test will be used in this investigation. If two variables have a long-term or long-run equilibrium connection, they are said to be co-integrated. Long-term co-integration occurs when two variables—dependent and independent—are non-stationary separately but their residual (combination) is stationary (Gujarati, 2004; Yang 2000). Granger non-causality testin a heterogeneous panel developed by Dumitrescu and Hurlin (2012) is used to examine the causal link between domestic debt and economic growth.

# 4.0 Empirical Result and Discussion Descriptive Statistics

The mean value for real gross domestic product (RGDP) stands at 4.5198 which is the highest, while domestic debt servicing (DDS) shows a lowest mean value of 0.1338. The standard deviation for all the variables shows low values and it implies that the variations are as low as possible, that is, the estimates are close to their true values. The skewness around their mean values gives negative values for federal government debt (FGD), treasury bills (TB), total savings (TOSA) and interest rate (INTR). This implies that FGD, TB, TOSA, GDT, INTR are skewed to the left since the values fall outside the boundary. Similarly, RGDP, state government debt (SGD), total government debt (GDT) and domestic debt servicing (DDS) are positively skewed. For Kurtosis, the values for RGDP, FGD, SGD and TOSA are less than 3, meaning that the distribution is flat. Also, the distribution of interest rate is long-tailed since the kurtosis value is equal to 3. The kurtosis value for domestic debt is greater than 3 and it means that the distribution is more peaked than normal. Furthermore, the probability value of Jarque-Bera reveals that domestic debt servicing is not normally distributed since the probability value of Jarque-Bera is lower than 0.05. However, RGDP, FGD, SGD, TB, TOSA, GDT and INTR are normally distributed owing to the fact that the probability values are greater than 5%.

	RGDP	FGD	DDS	SGD	TB	TOSA	INTR	GDT
Mean	4.519828	2.867869	0.133846	0.964789	2.495034	3.392348	1.231000	3.926897
Median	4.430322	3.007308	0.060000	0.651278	2.673878	3.525058	1.229170	3.912086
Maximum	4.865594	4.284263	0.970000	2.738693	3.578197	4.775538	1.500374	4.198374
Minimum	4.209823	1.048830	-0.170000	-0.886057	0.761928	1.959089	0.949390	3.753496
Std. Dev.	0.226878	0.954361	0.224600	1.160224	0.827708	0.879310	0.124481	0.099727
Skewness	0.296061	-0.319882	2.054224	0.017631	-0.532180	-0.274466	-0.628191	0.608306
Kurtosis	1.528485	1.957120	7.136862	1.641697	2.066688	1.723831	3.318014	3.185119
Jarque-Bera	4.088445	2.432460	55.23857	3.000123	3.256393	3.136142	2.729396	2.460919
Probability	0.129481	0.296345	0.000000	0.223116	0.196283	0.208447	0.255458	0.292158
Sum	176.2733	111.8469	5.220000	37.62676	97.30632	132.3016	48.00900	153.1490
Sum Sq. Dev	1.956002	34.61061	1.916923	51.15252	26.03385	29.38107	0.588831	0.377930
Observations	s 39	39	39	39	39	39	39	39
Source: Researcher's Computation Using Eviews 10.								

## Table 4.1: Summary of Descriptive Statistics

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## 4.2 Unit Root Test

The result of the Augumented Dickey Fuller test which is used to determine the stationarity or unit root of the variables is shown in Table 2.

Variabl	es ADF Sta	t Critical V @5%	alue Order of Integration	P Values	Remarks
RGDP	-3.9874	-2.9389	I(1)	0.0037	Stationary
FGD	-5.7822	-2.9389	I(1)	0.0000	Stationary
SGD	-6.8026	-2.9484	I(1)	0.0000	Stationary
DDS	-8.5317	-2.9389	I(1)	0.0000	Stationary
TOSA	-6.6581	-2.9458	I(1)	0.0007	Stationary
TB	-5.8280	-2.9389	I(1)	0.0159	Stationary
INTR	-6.1361	-2.9411	I(0)	0.0006	Stationary
GDT	-4.9131	-2.9411	I(1)	0.0003	Stationary

#### Table 4.2: Summary of the ADF Unit Root Test

Source: Researcher's Computation Using Eviews 10.

## 4.3 ARDL Bounds Test for Cointegration

Co-integration indicates the presence of a combination of non-stationary variables that are stationary. It helps to ascertain the presence of long run relationship amongst the variables.

Table 4.3: Summary	of ARDL Bounds '	Test
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Test Statistic	Value	k
F-statistic	6.673541	7

#### Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.03	3.13
5%	2.32	3.5
2.5%	2.6	3.84
1%	2.96	4.26

## Source: Researcher's Computation Using Eviews 10.

## 4.4 Autoregressive Distributed Lag Model

After establishing the cointegrating status of the model, the study therefore subjects the model to Autoregressive Distributed Lag Model (ARDL) to generate the coefficients of the parameters of the regression model.

Variable	Coefficien	t Std. Error	t-Statistic	Prob.		
С	0.430617	0.368132	1.169736	0.2520		
RGDP(1)	0.414182	0.071195	14.10467	0.0000		
FGD	0.032953	0.025943	1.270243	0.2145		
SGD(-1)	0.065128	0.006151	0.833666	0.4115		
DDS(-1)	-0.048179	0.004285	-1.908836	0.0666		
TB(-1)	-0.022894	0.020120	-0.143830	0.8867		
TOSA(-1)	0.048021	0.018501	2.595618	0.0149		
INTR(-1)	0.009598	0.030968	0.309950	0.7589		
GDT(-1)	0.121313	0.037174	3.263387	0.0029		
Short Run Estimate	Short Run Estimate					
Variable	Coefficien	t Std. Error	t-Statistic	Prob.		
С	0.297693	0.200398	1.485510	0.1504		
D(RGDP(-1))	0.667741	0.151785	4.399239	0.0002		
D(FGD)	-0.067452	0.039140	-1.723330	0.0977		
D(SGD(-1))	0.014908	0.004987	2.989568	0.0064		
D(DDS(-1))	-0.008315	0.003658	-2.273000	0.0323		
D(TOSA(-1))	0.023061	0.024859	0.927682	0.3628		
D(TB(-1))	-0.043704	0.020237	-2.159591	0.0410		
D(INTR(-1))	0.046342	0.046043	1.006486	0.3242		
D(GDT(-1))	0.027056	0.052278	0.517533	0.6095		
ECM-1	-0.287688	0.199282	-3.443625	0.0018		
R-squared	0.736411	Mean dependent var		0.016096		
Adjusted R-squared	usted R-squared 0.600065 S.D. de		endent var	0.020357		
S.E. of regression	0.014394	4394 Akaike info criterion		-5.404138		
Sum squared resid	0.004972 Schwarz c		criterion	-4.955209		
Log likelihood	101.8703	)3 Hannan-Quinn criter.		-5.251040		
F-statistic	4.667615	Durbin-Watson stat		2.208439		
Prob(F-statistic)	0.001197					

# **Table 4.4: Summary of Long Run and Short Run ARDL Result**Long Run Estimate

#### Source: Researcher's Computation Using Eviews 10.

From Table 4.6, it is observed that the regression lines for long run and short run estimates have positive intercepts as presented by the constant (c). The values stand at 0.4306 and 0.2977 respectively. This means that if all the variables are held constant or fixed (zero), real gross domestic product (RGDP) will be valued at 0.43 in the long run and 0.29 in the short run. Thus, the a-priori expectation is that the intercept could be positive or negative, so it conforms to the theoretical expectation.

The ARDL estimate reveals that the past values of real gross domestic product both in the long and short run have positive and insignificant impact on the current value of real gross domestic

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product. The coefficient is 0.4142 in the long run and 0.6677 in the short run, and it implies that in the long and short run, if the past value of RGDP is increased by 1 percent, the current value of RGDP will be increased on average by 0.41% and 0.67% respectively.

The coefficient of federal government debt in the long run is positive while in the short run, it is negative. This implies that 1 percent increase in FGD in the long run will increase RGDP by 0.03 percent, while in the short run, it will reduce RGDP by 0.07 percent. Both in the long and short run, the coefficients of state government debt reveal a positive impact on economic growth. This suggests that if on average, SGD is increased by 1 percent, economic growth will increase by 0.065 in the long run, and 0.015 in the short run. Total savings shows a positive value both in the long and short run. It means that a positive impact exists between TOSA and economic growth in Nigeria. The value for long run is 0.0480 and it suggests that on average, 1 percent increase in TOSA will increase RGDP by 0.05. Also, in the short run, the coefficient value for TOSA is 0.0231, and it indicates that 1 percent increase in TOSA will cause a rise of about 0.02 percent on RGDP. Domestic debt servicing, both in the long run and -0.0083 in the short run. The implication is that if on average, DDS is increased by 1 percent, it will reduce RGDP by 0.05% in the long run and 0.008% in the short run.

Similarly, interest rate has a positive coefficient value of 0.0096 in the long run and 0.0463 in the short run. It shows that on average, if INTR is increased by 1 percent, RGDP will increase by 0.009 percent in the long run and 0.05 percent in the long run. However, treasury bills exerts a negative impact on economic growth both in the long run and short run. The coefficient value stands at -0.0229 in the long run and -0.0437 in the short run, meaning that on average, 1 percent increase in TB will cause a decline in RGDP by 0.022 percent in the long run, and 0.043 percent in the short run. Total government debt (GDT), similarly has a coefficient value of 0.1213 in the long run and 0.0271 in the short run. This implies that on average, 1 percent increase in GDT will increase RGDP BY 0.12% and 0.03%.

Going by the p values, the result shows that, among all the variables, only the lagged value of RGDP, total savings and total government debt are statistically significant at 5 per cent, while the lagged value of FGD, SGD, INTR, DDS and TB are statistically insignificant in the long run. Also, in the short run, the lagged values of RGDP, SGD, TB and DDS are statistically significant while FGD, TOSA, INTR and GDT are statistically insignificant at 5 per cent level of significance.

The error correcting term (ECM) which checks the speed of adjustment reveals a value of -0.2877. This implies that about 29 per cent disequilibrium in the previous year would be corrected for in the current year.

Null Hypothesis:	Obs	F-StatisticProb.
GDT does not Granger Cause RGDP RGDP does not Granger Cause GDT	39	3.82509 0.0317 11.1200 0.0002

## Table 4.7: Granger Causality Test Result

## Source: Researcher's Computation Using Eviews 10.

From the result in Table 4.7, it is clearly seen that total government debt granger causes real gross domestic product and that real gross domestic product granger causes total government debt. This

is seen as their p values of 0.0317 and 0.0002 are lower than the 5 percent level of significance. Thus, the result shows bi-directional causality.

#### 5.0 Conclusion and Policy Recommendation

The study examines the impact of domestic debt on economic growth in Nigeria between 1981 and 2022, using ARDL model. Data were sourced from CBN Statistical bulletin 2022 and the variables of the model include real gross domestic product (RGDP), federal government debt (FGD), state government debt (SGD), domestic debt servicing (DDS), treasury bills (TB), total savings (TOSA), total government debt (GDT) and interest rate (INTR). Real gross domestic product (GDP) was used to proxy economic growth which is the dependent variable, while FGD, SGD, DDS, TB, TOSA and INTR are the independent variables.

For robustness and reliability of the model, Augmented Dickey-Fuller unit root test was used to establish the stationarity status. The result shows that RGDP, FGD, DDS, GDT, TB, TOSA and SGD are stationary at first difference, while INTR is stationary at level. The result of the VAR lag order selection criteria shows lag one as the appropriate lag model for the study. The study further utilized ARDL Bounds test for cointegration to determine whether there is long run relationship among the variables or not. The result reveals that there is long run relationship among the variables since the F-statistic of 6.735 is greater than the both the upper (2.32) and lower (3.5) bound values at 5 percent level of significance. Based on this long run relationship which exists among the variables, the ARDL model was adopted to test the relationship between the dependent and explanatory variables.

Government in an attempt to finance its operations may incur debts by borrowing from both local and foreign markets. It is said to be productive when the funds borrowed are used to provide capital projects whose proceeds would help pay back those loans. From the findings of this study, government debt both federal and state has been established to be a means of growing the economy if the funds are expended judiciously. The result also showed that total government debt leads to economic growth and that economic growth granger causes total government debt. Based on the joint significance of the study and the positive impact of the debt on economic growth, it can therefore be concluded that domestic debt can help Nigeria economy to grow.

Government should ensure proper, efficient and effective use of both state and federal government borrowings, and money raise from treasury bills sales. This would help to provide the basic infrastructures needed for investments to thrive, and as such, the economy will grow.

Government should reduce borrowing but effectively manage the available resources to develop the productive sectors. This would help to generate more revenue to government coffers and the domestic debt serving rate will reduce.

Government should channel its total debts to developmental projects that will encourage both foreign and local investors, as their investments would have wholesome effect on the economy at large.

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