

## GROWING DOMESTIC AND EXTERNAL DEBT: THE BURDEN ON GROWTH IN NIGERIA

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### ***ABSTRACT***

*This paper examined the impact domestic debt and external debt has on growth in Nigeria spanning the period 1981 to 2018 using VECM technique. Based on theory, a model was drawn and estimation carried out accordingly. While external debt significantly impacted on economic growth positively in both short and long run, domestic debt was found to exhibit statistically insignificant negative and positive impact on economic growth in the short run and long run respectively. Comparatively, while the magnitude of impact of external debt outweighs domestic debt in the short run; in the long run, the magnitude of impact of domestic debt (though statistically not significant) outweighs external debt. Stability test conducted armed that the model was significantly stable. By way of policy options; utilization of external debt was emphasised while taking caution in using domestic debt as a source of fund for growth amongst others.*

*Keywords: Debt, Economic growth, Time series analysis, Developing country  
JEL: H63, F43, C32, N17*

## 1. Introduction

The attainment of macroeconomic goals of government such as economic growth, full employment and so on requires the commitment of material and financial resources. The often case is that financial resources at the disposal of policy makers falls below what is needed, this create a resource gap resulting in sourcing for additional fund from other sources such as domestic borrowing and external borrowing. Nigeria economy heavily depend on debt owing to weak export base comprising mainly of crude/primary produce whose price often fluctuates in global affairs, misallocation and mismanagement of resources amongst others (International Monetary Fund-IMF 2018). Despite the granting of some sort of debt relief at varied point in time (for example 2006) owing to huge debt burden on the economy, Nigeria domestic and external debt profile has again being on the increase. Concern has been raised by development partners such as IMF and World Bank that if the current borrowing spree is not effectively manage; it could result in severe negative consequence on the Nigeria economy.

Though there exist myriad studies in the literature that relates debt to growth, however, these studies are mixed and can be categorized into three strands. The first comprises studies that relates public debt (domestic and external debt in aggregate terms) to economic growth such as Ndeupa (2018); Gomez-Puig and Sosvilla- Rivero (2017); Saifuddin (2016). The second in this light are studies that relates domestic debt to economic growth such as Ayuba and Khan (2019); Okwu, Obiwuru, Obiakor and Oluwalaiye (2016); Takashima, Kato and Ogibayashi (2014). The third strand consist of studies that relates external debt to economic growth such as Edo, Osadolor and Dading (2019); Ijirshar, Joseph and Godoo (2016); Lau and Kon (2014). However, study that tie domestic debt and external debt in same model with the intent of comparatively bringing to fore their specific impact on growth in Nigeria seems not to have been giving much attention. This study widens the scope of coverage (1981-2018) using relevant econometric technique so as to present reliable result that inform taking valid position in the light of the existing mixed findings. Following this introduction is background analysis of domestic debt, external debt and growth in section two. This is followed by empirical review in section three. Theory, model specification, estimation techniques and sources of data are presented in section four. Section five deals with result presentation, discussion and recommendations while section six concludes the study.

## 2 Background Issue

Issues discussed here are meant to give a broader perspective on the major concept (debt and growth) of the study.

### 2.1 Structure and Trend in Nigeria Public Debt

Debt instrument are usually contracted with the intent of addressing developmental challenges. Public debt in Nigeria is made of external debt, Federal government domestic debt and states domestic debt. According to Obadan (2017) Nigeria public debt grew significantly from N9.105 trillion in 2012 to over N17.360 trillion in 2016 representing about 90 percent increase in four years.

Table 1 shows the structure of debt in Nigeria for the period 2012 to 2017. It shows the percentage share of total external debt stock, Federal Government domestic debt stock and State Government domestic debt stock (in percentages of total debt and GDP). It can be observed from the table that percentage share of total debt with respect to external debt, Federal Government domestic debt and State Government domestic debt increased significantly for the period. The percentage share of aggregate debt with respect to Federal Government domestic debt and State Government domestic debt stock outweighs that of external debt stock. Also on the average, aggregate domestic debt stock outweighs that of aggregate external debt stock (in percentage of GDP).

**Table 1: Structure of Nigeria Public Debt in Recent Times (2012-2017)**

<b>External Debt</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
% of Total	11.17	13.68	14.34	16.38	20.04	23.03
% of GDP	2.50	1.73	1.81	2.13	3.23	4.35
<b>Federal Domestic Debt</b>						
% of Total	71.79	70.88	69.47	68.56	63.70	61.33
% of GDP	16.1	8.97	8.79	8.93	10.28	11.57
<b>State Domestic Debt</b>						
% of Total	17.04	15.45	16.19	15.05	16.26	15.6
% of GDP	3.82	1.95	2.05	1.96	2.76	2.95
<b>Total Public Debt</b>						
% of GDP	22.43	12.65	12.65	13.02	16.27	18.87

Source: Authors' Computation using Data from Nigeria Debt Management Office (2018)

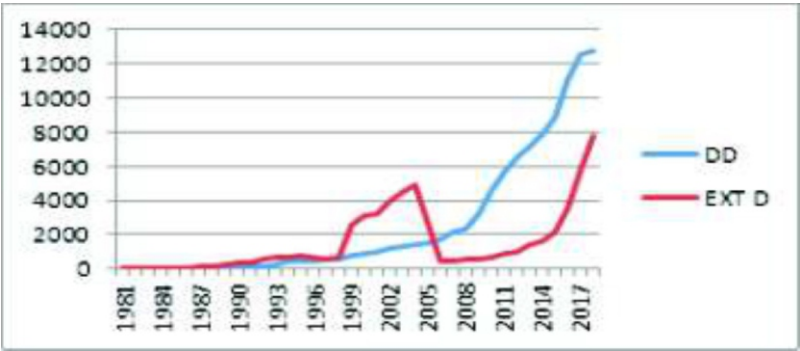
The major domestic debt instrument issued by Debt Management Office (DMO) (office saddled with the responsibility of debt management and its related activities) on behalf of the Nigeria government includes; treasury bills, bonds, treasury certificates, promissory notes, treasury bonds and development stocks Central Bank of Nigeria (2018). Between 1980 and 2007, the bulk of domestic debt was generated through the issuance of treasury bills. However, since the introduction of bond in 2003, bonds became a prominent debt instrument used to raise fund in Nigeria due to its attractive interest rates. Worthy to also state that a high proportion of Nigeria external debt emanate from Paris Club and the London Club of Creditors. Others according to CBN (2018) include; IMF and international promissory note holders.

Figure 1 shows that the trend in external debt is in the upward direction for the period 1981-2018. On the average, the volume of external debt outweighs that of domestic debt in Nigeria for the period. The rise in Nigeria external debt is not unconnected to the need for more fund to address myriad developmental challenges bedeviling the country as well as the non-servicing of the outstanding debt resulting in accumulation of interest on debt, thereby pushing the total debt stock upwards. Though the debt reliefs granted Nigeria by the Paris and London Club of Creditors in 2005/2006 resulted in the nosedived of Nigeria external debt profile. However, external debt profile of Nigeria began to rise steadily again standing at about N523.30 billion, N896 billion, N1631 billion and N3478 billion in 2008, 2011, 2014 and 2016 respectively (World Bank, 2019).

Also from Figure 1, it can be observed that there was a gradual rise in the volume of domestic debt in Nigeria for the period. Notwithstanding the external debt relief granted Nigeria at different intervals, the country's domestic debt continually soared and has being more pronounced in recent times (between 2016 to 2018). The increase in Nigeria domestic debt profile could be attributed to the need to seek for fund domestically to complement external source of fund for growth and development.



**Figure 1: Domestic and External Debt Trend in Nigeria (1981-2018) in real Terms**



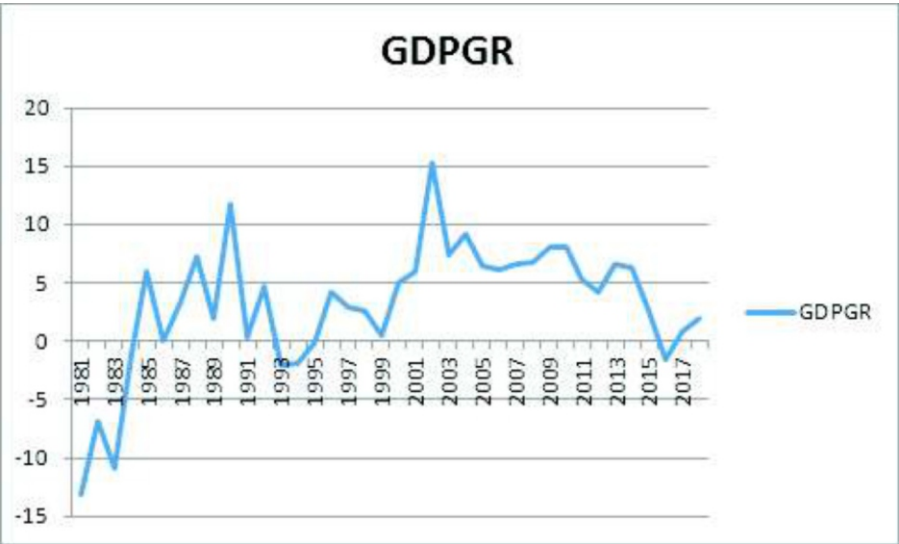
Source: Authors' compilation using Data from WDI 2019

## 2.2 Economic Growth Trend in Nigeria

Growth in an economy can be brought about by a number of factors such as improvement in the productive capacity of labor force, innovation and technological advancement, growth in physical capital stock amongst others.

From Figure 2, it can be observed that real GDP growth rate in Nigeria was in the negative from 1981 to 1984, 1993 to 1995 and more recently in 2015/2016. These periods were characterized by a reduced volume of economic activities owing to domestic and international factors such as political instability, sharp fall in crude oil prices in the international market and economic downturn. The lowest GDP growth rate in Nigeria was recorded in 1981 and 2016 while its highest value was recorded in 2002 and 2009. Edo, Osadolor and Dading (2019) corroborated with the assertion that economic growth in Nigeria was at its peak and lowest ebb of 6.9 percent and -1.6 percent in 2009 and 2016 respectively with 4.8 percent average for the period 2005 to 2017. A cursory look at figure 1 shows that GDP growth rate in Nigeria was unstable for the period and falls below the 6 percent benchmark recommended by IMF/World Bank.

**Figure 2: Trend in Real GDP Growth Rate in Nigeria between 1981 and 2018**



Source: Authors' compilation using Data from WDI 2019

### 3. Empirical Literature Review

There are avalanche of studies that examined the impacts debt has on economic growth. This may not be unconnected to the fact that debt instrument have a far reaching effect on the economy. An attempt is made here to briefly bring to fore relevant studies in this light in the eschewing paragraphs.

Owosu-Nantwi and Erickson (2016) employed VECM in the examination of the impacts public debt has on growth in Ghana covering 1970-2012. The findings were that public debt is positively related to growth in the long run while a bi-directional causality was established between public debt and growth in the short run. With OLS methodology, Al-Zeaud (2014) examined how Jordan economic growth is impacted by public debt for the period 1991-2010. The result revealed that public debt significantly spurs economic growth. Similar studies in this light includes; Sheikh, Faridi and Tariq (2010); Egbetunde (2012); Saifuddin (2016); Sánchez-Juárez and García-Almada (2016). However, Kumar and Woo (2010) panel study comprising 38 countries with OLS technique for the period 1970-2010 revealed that public debt is inimical to growth. Similarly, Ndeaupa (2018) employed fixed and random effect

models and found that public debt is negatively related to growth in CEMAC and that the huge public debt profile partly accounted for the poor growth of the sub-region. This finding emanated from the investigation carried out on the impact public debt has on growth in CEMAC sub-region between 2000 and 2016. Other studies in this light includes; Pattillo, Poirson, and Ricci (2002); Laina (2011); Obademi (2012); Panizza and Presbitero (2014); Lee and Ng (2015); Gomez-Puig and Sosvilla-Rivero (2017).

Also, the impact domestic debt has on growth in Nigeria between 1981 and 2012 was examined by Bakare, Ogunlana, Adeleye and Mudasiru (2016) with OLS methodology. It was found that domestic debt was positively related to growth. Ayuba and Khan (2019) examined the impact and nexus that exist among domestic debt, fiscal policy and growth in Nigeria between 1981 and 2013. With ARDL approach, a positive relationship was established between domestic debt, public revenue and growth. Domestic debt plays key role in savings mobilization in a functioning capital market (Thumrongvit, Kim and Pyum, 2013). This no doubt spurs growth in the long run. This was position was also supported by Mohd-Daud, Ahmad and Azman-Saini (2013) by asserting that domestic debt serves as stimuli for households and investors to save. More so, Moss, Petterson and Van de Walle (2006) opined that accumulation of domestic debt crowd in private sector investment, reduce reliance on external debt and strengthen domestic financial institutions. However, Maana, Owino and Mutai (2008) found a negative relationship between domestic debt and growth in Kenya with OLS methodology covering the period 1996 to 2007. Similarly, Okwu, Obiwuru, Obiakor and Oluwalaiye (2016) found a positive relationship between domestic debt and growth in short run and long run while a negative relationship was established between servicing of domestic debt and growth in Nigeria for the period 1980-2015 with ECM methodology. Onyeiwu (2012) employed OLS and ECM methodology in the examination of the relationship and impact domestic debt has on growth spanning 1994 to 2008. It was found that domestic debt was above the benchmark of bank deposit (higher than 35 per cent). Thus, it was held that domestic debt impact negatively on growth and crowd out private sector investment. Other studies in this light includes; Gale, Orszag, Brainard, Cumby, Dickens, Elmendorf and Russek (2004); Asogwa (2005); Blavy (2006); Baldacci and Kumar (2010); Cochrane (2010); Abbas and Christensen (2010); Jawadi, Mallick, and Sousa (2011); Filardo, Mohanty and Moreno (2012); Takashima, Kato and Ogibayashi (2014).

Ijirshar, Joseph and Godoo (2016) employed Cointegration and ECM technique in the investigation of the nexus between external debt and growth in Nigeria from 1981 to 2014. It was found that external debt stock was positively related to growth (though external debt servicing exhibited negative impact on growth). Lau and Kon (2014) corroborated by asserting that external debt are positively related to growth in some countries. This was based on the findings from the examination of the nexus between external debt, export and growth in seventeen (17) Asian countries. Other studies in this light includes; Moreira (2005); Jayaraman and Lau (2009); Sulaiman and Azeez (2012); Chinaemerem and Anayochukwu (2013). However, Iyoha (1999) opined that external debt stock and debt service payments impact negatively on investment and growth in Sub Saharan Africa (SSA). This statement was informed by the findings from the examination of the nexus that exist between external debt stock, debt service and growth in SSA using simultaneous equation model. Also, Nwannebuike, Ike and Onuka (2016) found that while in the short run external debt exert positive impact on growth, in the long run external debt exert negative impact on growth. This was the findings from the examination of the impact external debt, external debt service and exchange rate has on growth in Nigeria between 1980 and 2013 with OLS methodology. Other studies that held that external debt stock retards growth includes; Edo (2002); Schclarek (2004); Vamvakidis (2007); Dogruel and Dogruel (2007); Hamed, Ashraf and Haudhary (2008); Choong, Lau, Liew and Puah (2010), Saad (2012); Adedoyin, Babalola, Otekunri and Adeoti (2016); Edo, Osadolor and Dading (2019).

In summary, studies in the literature can be categorised into three comprising studies that aggregate domestic and external debt (public debt) in relation to growth; studies that specifically examined domestic debt and growth; studies that specifically examined external debt and growth. There seem to be scanty studies that specifically tie domestic debt and external debt so as to comparatively bring to fore their specific impact on economic growth particularly with respect to Nigeria. Also from the existing studies, while some studies revealed that public debt, domestic debt or external debt impact positively on growth, others found a negative impact. The implication of this is that despite the fact that debt instruments are often seen as a means to bridge existing savings-investment gap in the economy and by extension aid growth, this is however not the case in some situations. Some of the reasons advanced for the negative impact of debt on economic growth is the non-utilization of debt proceed in productive and critical sectors of the economy, corruption, misallocation and embezzlement of fund. Also, excessive domestic debt accumulation result in tax distortion, crowding out of domestic investment, exchange rates/currency crises amongst others.

## 4. Theory, Model Specification and Methodology

### 4.1 Theory and Model

The Solow growth model of 1956 provides the basis for analyzing economic growth. The model holds that variation in output (Y) over time is subject to changes in inputs (capital (K) and labour (L)) with a provision for technical progress (A) which drives capital-labour ratio to converge over time in the direction of equilibrium ratio (Solow, 1956). The model also holds that with technical progress, there is the tendency for capital-labour ratio to converge towards equilibrium ratio over time. This means that the long-run per capita growth rate depends entirely on the exogenous rate of technical progress. Its general functional form is stated as;

$$Y = f(A, K, L) \quad (1)$$

Where; Y = output; A = technical progress; K = capital stock; L = labour

The two basic assumptions that form the pillar of this growth model are that there is a positive and diminishing returns to private inputs. That is, for all  $K > 0$  and  $L > 0$ , the production function exhibits positive and diminishing marginal productivity with respect to each input such that;

$$df/dk, df/dl > 0; \quad d^2f/d(kl) > 0; \quad \text{and} \quad d^2f/dk^2, d^2f/dl^2 < 0$$

This shows that the model assumes that holding constant the levels of technology and labour, each additional unit of capital produces positive additions to output, but these additions decrease as the number of fixed factors rises. Similar explanations also hold for labour. The second basic assumption of the model is that as the marginal product of capital (or labour) approaches infinity, capital (or labour) tends toward zero (0) and as the marginal product of capital approaches zero (0), capital (or labour) tends towards infinity; that is,

$$(\delta f/\delta k) = (\delta f/\delta l) = \infty, \lim \text{as } k \rightarrow 0; \quad (\delta f/\delta k) = (\delta f/\delta l) = 0, \lim \text{as } k \rightarrow \infty$$

According to Iyoha, Ighodaro and Adamu (2012), assuming the growth model is twice differentiable, subject it to constant returns to scale and that technical progress is Hicks-neutral, the differentiation of equation (1) with respect to time (t) and dividing through by output (Y) result in equation (2);

$$\dot{Y}/Y = \dot{A}/A + (FKK/Y) * (\dot{K}/K) + (FLL/Y) * (\dot{L}/L) \quad (2)$$

Where;  $\dot{Y}/Y$  = continuous time rate of growth;  $\dot{A}/A$  = hicks-neutral rate of change of technological progress;  $\dot{K}/K$  = growth rate of capital stock;  $\dot{L}/L$  = growth rate of labour;  $FK$  = marginal products of capital;  $FL$  = the marginal products of labour.

Equation (2) relates output growth rate as a function of growth of technical change, growth of capital stock and growth of labor.

Worthy to state here that in analyzing growth relationships in most empirical works, Solow growth model has been modified to obtain the augmented Solow growth model (Barro 1991; Mankiw, Romer and Weil 1992; Iyoha, Ighodaro and Adamu 2012). Variables of interest are usually brought in through total factor productivity; thus implying that factor productivity is incorporated as a means of explaining the growth process (Udah, 2011). This therefore means that besides capital and labor, growth rate depends on other variables such as interest and inflation rate, trade, FDI (Iyoha, Ighodaro and Adamu 2012).

Building on the works of Iyoha, Ighodaro and Adamu (2012) and mindful of the problem of over parameterization of variables, variables of interest are brought into the growth model as captured in the reduced form of Vector Error Correction Mechanism (VECM) functionally presented as;

$$\Delta V_t = \delta_{it} + \sum_{i=1}^k \beta_{ij} \Delta V_{t-j} + \phi_{ij} ECT_{t-j} + \varepsilon_{it} \quad (3)$$

Where;  $V_t$  = vector of variables (real per capita income growth rate (*GRG*); domestic debt in % of GDP (*DDT*); external debt in % of GDP (*EDT*); trade openness- total trade in % of GDP (*TOP*); inflation rate (*INF*)).  $V_{t-1}$  = vector of lagged variables;  $\delta_{it}$  = vector of intercept terms;  $\beta_{ij}$  = matrix of coefficients;  $\Delta$  = first difference operator;  $ECT_{t-1}$  = error correction term;  $\phi_{ij}$  = adjustment coefficient;  $\varepsilon_{it}$  = stochastic term.

The *a priori* expectation of the coefficient estimates is indeterminate. That is, it could either be positive or negative signs.

## 4.2 Method and Data Sources

VECM technique is employed for this study. Its choice stem from the fact that all variables *are endogenous and* forecasts generated are often better than conventional structural models (Andrei and Andrei, 2015). Also, VECM present the speed of adjustment in the case of temporary disequilibrium owing to shocks as well as ensures that consistent estimates are obtained in the interrelationship among variables.

Yearly time series data from 1981 to 2018 is employed for this study. Data on growth rate (GRG), trade openness (TOP) and inflation rate (INF) are obtained from the World Bank (2019) while domestic debt (DDT) and external debt (EDT) data are sourced from CBN (2019).

## 5. Result and Discussion

The result of the estimations carried out are presented and discussed in this section. Table 2 shows result of stationarity test (unit root test) using ADF and

PP unit root test with the later serving as a robustness check. It can be observed from the table that few of the variables were stationary at levels in both tests, however at first difference, all the variables attained stationarity at 5 percent significant level.

Table 2. Unit Root Test

ADF* Test							
Variables	Level			1st Diff			Order of Integration
	ADF Test Stat	Critical Value @ 5%	Inference	ADF Test Stat	C critical Value @ 5%	Inference	
GRG	-4.83	-2.95	Stationary	-8.73	-2.95	Stationary	I(0), I(1)
EDT	-2.51	-3.55	Non Stationary	-4.34	-3.55	Stationary	I(1)
DDT	-2.89	-3.55	Non Stationary	-4.60	-3.55	Stationary	I(1)
TOP	1.38	-3.60	Non Stationary	-5.37	-3.58	Stationary	I(1)
INF	-3.84	-3.55	Stationary	-5.34	-3.55	Stationary	I(0),I(1)
PP** Test							
Variables	Level			1st Diff			Order of Integration
	PP Test Stat	Critical Value @ 5%	Inference	PP Test Stat	C critical Value @ 5%	Inference	
GRG	-4.83	-2.95	Stationary	-18.02	-2.95	Stationary	I(0), I(1)
EDT	-2.20	-3.54	Non Stationary	-4.33	-3.55	Stationary	I(1)
DDT	-2.64	-3.54	Non Stationary	-4.49	-3.55	Stationary	I(1)
TOP	-1.55	-3.54	Non Stationary	-9.67	-3.55	Stationary	I(1)
INF	-2.73	-3.54	Non Stationary	-9.62	-3.55	Stationary	I(1)

Source: Authors' Computation  
Augmented Dickey Fuller\*, Phillips-Perron\*\*

Table 3 shows cointegration result conducted using ARDL Bounds test approach pioneered by Pesaran, Shin and Smith (2001) owing to the mixed order of integration. From the table, there exists a long run cointegrating relationship among the variables because the upper bound critical value at 10, 5 and 1 percent levels are lesser than the F-stat value of 7.93. This affirms a rejection of the null hypothesis that there exists no long run cointegrating relationship among the variables.



Table 3: Cointegration Test

Bounds Test for Cointegration				
F-Bounds Test		Null Hypothesis: No Levels Relationship		
Test Statistics	Value	Significant	1(0)	1(1)
Asymptotic: n=1000				
F-statistic	7.93	10%	2.08	3
K	5	5%	2.39	3.38
		2.5 %	2.7	3.73
		1%	3.06	4.15

Source: Authors' Computation

From Table 4, while external debt significantly impact growth positively in the short run, domestic debt was found to exhibit statistically insignificant negative impact on growth in the short run. With respect to trade openness and inflation rate, both were positively related to growth in the short run with trade openness exhibiting a statistical significant impact at 5 percent while inflation rate was not statistically significant. The ECT conforms to the necessary condition of co-integrating relationship among the variables. This is because it is negatively signed and statistically significant. The speed of adjustment to equilibrium in the event of temporary displacement was relatively moderate to the tune of about 20 percent. Also from Table 4, the long run model indicates that the impact of external debt on growth was positive and significant statistically. Also, though the growth impact of domestic debt was positive, it was however not significant statistically in the long run. Trade and inflation rate were found to exhibit negative and statistical significant impact on growth in the long run. Comparatively, while the magnitude of impact (as shown by the coefficient) of external debt outweighs that of domestic debt in the short run; in the long run, the magnitude of impact of domestic debt (though not significant) outweighs that of external debt.

Table 4: Estimated Vector Error Correction Model

Dependent Variable = GRG					
	Short run VECM		Long run VEC M		
Variables	Coefficient	t-ratio	variables	Coefficient	t-ratio
ECT(-1)	-0.20	-2.93	EDT	0.29	2.83
D(GRG (-1))	-0.29	-1.47			
D(EDT(-1))	0.19	1.52	DDT	0.51	1.04
D(DDT(-1))	-0.12	-0.16	TOP	- 0.43	3.53
D(TOP(-1))	0.04	2.05	INF	- 1.26	8.19
D(INF(-1))	0.12	1.03	C	16.38	
C	0.35	0.26			

Source: Authors' Computation

Table 5 shows VEC granger causality test conducted. In panel 1, the short run growth predictability of external debt, domestic debt and inflation were not statistically significant. Trade openness was however observed to granger caused economic growth with causality statistically significant at 5 percent. However, the predictive power of all the variables for growth taken together was statistically significant at 10 percent level. In panel 2, with the exclusion of inflation rate which predicts domestic debt stock in the short run with a statistical significant predictive ability at the 10 percent level, other variables (economic growth, external debt and trade openness) could not predict domestic debt in the short run. This is because the predictive ability of these variables for domestic debt fails the test of statistical significance. Similar conclusion is also held when the variables are taking together. Lastly, in panel 3, the test shows that none of the excluded variables individually or taking together significantly predict external debt in the short run. Thus, growth, domestic debt, trade openness and inflation are not significant predictors of external debt stock in the short run.

Table 5: VEC Granger Causality

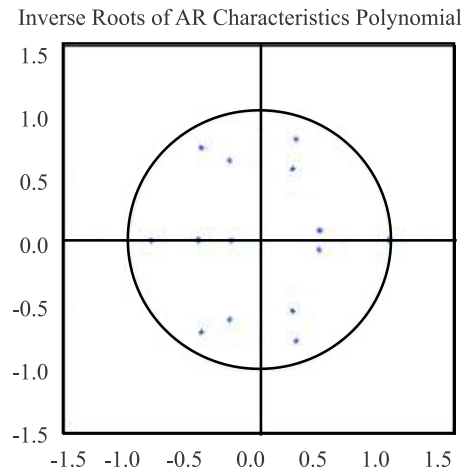
Panel 1: Dependent variable: D(GRG)			
Excluded	Chisq	Df	Prob.
D(EDT)	2.716326	2	0.2571
D(DDT)	1.300097	2	0.5220
D(TOP)	7.017437	2	0.0299
D(INF)	3.484352	2	0.1751
All	17.24079	8	0.0691

Panel 2 : Dependent variable: D(D DT)			
Excluded	Chi-sq	Df	Prob.
D(EDT)	0.072371	2	0.9645
D(DDT)	1.775043	2	0.4117
D(TOP)	2.513091	2	0.2846
D(INF)	4.818163	2	0.0899
All	13.43788	8	0.2002
Panel 3 : Dependent variable: D(EDT)			
Excluded	Chi-sq	Df	Prob.
D(GRG)	0.486297	2	0.7842
D(DDT)	1.709463	2	0.4254
D(TOP)	3.988974	2	0.1361
D(INF)	2.069331	2	0.3553
All	8.497266	8	0.5804

Source: Authors' Computation

Model stability test was conducted as shown in Figure 3. From the figure, none of the points of the inverse roots of the AR characteristic polynomial was found beyond the circumference of the circle. This implies that the model is stable and that estimates generated could be relied on.

Figure 3. Stability Test



Source: Authors' Computation

### 5.1 Policy Implications and Recommendation

The statistical significance and the magnitude of the positive impact external debt have on growth in short and long term underscores its relevance in the sourcing of fund for growth in Nigeria. This also implies that over the long term, external debt contraction and its utilisation reflate the economy in tune with similar findings by Godoo (2016), Lau and Kon (2014), Moreira (2005). The contrary however holds for domestic debt owing to the statistical insignificance of the negative and positive impact it has on growth over the short and long term horizon respectively. This is in tune with findings by Okwu, Obiwuru, Obiakor and Oluwalaiye (2016); Takashima, Kato and Ogibayashi (2014) and Maana, Owino and Mutai (2008). The long run negative impact of trade on growth indicates that Nigeria trade and its related activities with the global community is leaves much to be desired. Also, the long run negative impact of inflation rate on growth implies that inflation rate is beyond the threshold that support growth (approximates above a single digit).

The followings are suggested for consideration;

- i. Policy makers in Nigeria should place emphasis on the use of external debt in the mobilisation of fund for growth enhancement.
- ii. Caution should be applied in the use of domestic debt as a source of fund for growth in Nigeria owing to its unimpressive impact on the economy.
- iii. Considering the long run negative impact trade has on economic growth, caution should be taking in integrating the Nigeria economy with the global economy through trade.
- iv. Lastly, monetary policy tools should be deployed by relevant authority to control inflation (possibly within a single digit) in other to tame its negative effect on growth.

### 6. Conclusion

Nigeria economic growth has been weakened by a host of factors such as; weak productive base, huge savings-investment gap just to mention a few. To address these developmental concerns, domestic and external debts are often resorted to by policy makers. This has however resulted in the accumulation of huge domestic and external debt over the years. In this light, an investigation was carried out to comparatively establish the impact domestic debt and external debt has on growth in Nigeria. To this end and based on theory, a model was drawn to capture the relevant variables for the study. Having tested for unit root and cointegration, the model was analysed using VECM framework. It

was found that external debt is significantly and positively related to growth in the short and long run. It was however found that domestic debt exhibited a statistical insignificant negative and positive impact on growth in the short and over the long term horizon respectively. Comparatively, while the magnitude of impact (as shown by the coefficient) of external debt outweighs that of domestic debt in the short run; in the long run, the magnitude of impact of domestic debt (though not significant) outweighs that of external debt. The result also shows that the speed of adjustment is relatively moderate (20 percent) while stability test affirmed that the model is stable and that estimates generated can be relied on. This was thereafter followed by policy options.

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