Public Debt Sustainability in Nigeria

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ABSTRACT

Public debt is a vital instrument for governments to fund public expenditure. This paper examined the public debt sustainability and economic growth in Nigeria using annual time series data from 1981 to 2021 and the generalized method of moments (GMM) technique. The variables used in the study include; Real GDP, external debt, domestic debt, debt servicing and government consumption. To capture the period the country was given debt relieve fund we used debt relief dummy. The effect of recession on the economy was captured using recession dummy. The empirical result showed that debt overhang exists with inverted U-shaped debt Laffer curve. The optimum public debt threshold range is 30% – 40% while the threshold benchmark is 36% for composite debt stock and 33% for external debt stock. Based on the findings, the paper recommends that Nigerian government should ensure optimal utilization of external debt to avoid crowding out of investments and also the existence of debt overhang.

Keywords: Debt overhang, Debt servicing, GMM, Nigeria, Public debt sustainability.

JEL Classification: H60, H63, C20

INTRODUCTION

Public debt sustainability means the ability of the government to meet its debt obligations without exceptional financial assistance or going into default. Countries borrow when they are unable to generate enough funds to carry out their productive activities. Public debt is an important instrument for governments to fund public spending, particularly when it is difficult to raise taxes and reduce public expenditure. For many years, this process has left most governments with huge debt burden. Borrowings to finance capital infrastructural development are the solution to faster economic growth and achieving the sustainable development goal (SDGs) (Ogunjimi, 2019). But excess borrowings without appropriate planning for investment may lead to heavy debt burden and interest payment, which in turn may create several undesirable effects for the economy (Joy & Panda, 2020). Public debt could be either internal (domestic) or external (foreign). Adofu and Abula (2010) defined domestic debt as debt instruments issued by the Federal Government and denominated in local currency. As stated by Todaro and Smith (2011), external debt is the total private and public foreign debt owed by a country. In other words, external debts are debts owed by a country to institutions of countries abroad, that is, the creditors are foreigners, which in case its servicing and repayment will mean a drainage of national resources in favour of those foreigners.

The increasing debt burden of Nigeria is pointing toward another debt crisis. It is evident that unsustainable public debt is discouraging investment and lowering growth in Nigeria, thereby reducing the country's global competitiveness, and increasing financial market susceptibility to international shocks (Ogbonna, Ibenta, Chris-Ejiogu & Atsanan, 2019). Moreover, debt sustainability can be explained using either debt to GDP or debt service to revenue ratio. Nigeria's debt to GDP ratio is estimated at about 35.71%, as debt stock rises to N38 trillion naira in the third quarter of 2021 (DMO, 2021). As this is lower than the self-imposed limit of 40%, the rate is increasing faster, due to inclined borrowing and tepid economic growth. For now, debt-to-GDP is not regarded as the best indicator of debt sustainability, especially in a country like Nigeria that has one of the lowest tax-to-GDP ratios (6.1%) in the world. For Nigeria, a better indicator of

debt sustainability is the debt service-to-revenue ratio, which is estimated at 86%, a metric that reveals whether the government is generating enough revenues to pay down its debts as they mature. The debtservice to revenue ratio which in Nigeria has in recent years risen to worrying levels, leading investigatorsto ask if the country is broke or heading to insolvency.

According to NBS (2021) Nigeria's public debt hit N38.005 trillion by third quarter of 2021. The government spent 4.2 trillion Naira on debt servicing in 2021, this is out of total revenue of N5.51 trillion. The rising debt profile of Nigeria reached a new milestone with the country's debt service as a percentage of revenue rising to 76.2% in 2021. This shows that 76.2% of the revenue generated in 2021 was used for debt servicing. The government constant borrowing from the domestic market limits the private businesses from assessing funding for business growth and development (Ogunjimi, 2019). When a country spends significant parts of its revenue on servicing huge debts, it has very little left to fund critical infrastructures which in turn affect growth negatively. Over the years, the governments of Nigeria have enunciated several debt management approaches to reduce the burden of public debt on the economy and ensure sufficient economic growth and development. Such approaches include rescheduling the debt, debt conversion and liquidation but evidence revealed that the various strategies used in managing Nigeria's public debt have not achieved their desired objectives.

Some empirical research have been carried out on the issue of public debt in Nigeria but most of the studies focused on the impact of public debt on Nigeria's economic growth without looking out to determine the optimum public debt threshold for Nigeria in order to ascertain how sustainable is Nigeria's public debt and to find out if there is the prevalence of debt overhang in Nigeria. More so, these studies like Didia and Ayokunle (2020), Elom-Obed, Odo, Elom-Obed and Anoke (2017), Udoh, Ekeowa, Okechukwu, Obiora- Okafor and Nwonye (2020) made use of VECM and ARDL estimation techniques which are not adequate in generating consistent and robust coefficient estimates about the study variables, thereby providing a gap in the methodology used. This study adopted the generalized method of moment (GMM), which helps to solve the endogeneity problem by reverse causality relationship. Based on this research gap, this study intends to bridge the knowledge gap by examining the optimum public debt limit for Nigeria and also investigate the prevalence of debt overhang in Nigeria. The findings of this study would have direct policy implications, especially on government fiscal measures and investment decisions. The results are expected to guidepolicymakers in the design of an effective public debt strategy that is conducive for Nigeria's economic growth. The remaining parts of this paper were structured into literature review, methodology, results and discussion, as well as conclusion and recommendations.

REVIEW OF RELATED LITERATURE

This section examines theories that deal with public debt and economic growth.

Debt Overhang Hypothesis

Debt-overhang theory states that a country's debt is more than its debt repayment ability. Ezirim (2005) explains the debt overhang hypothesis as one where the accumulated stock of debt acts as a tax on future income and production, and thereby acts to impede investments by turning away the private sector (foreign and domestic) investors. The "debt overhang effect" comes into play when accumulated debt stock discourages investors from investing in the private sector for fear of heavy tax placed on them by government. This is known as tax disincentive. The tax disincentive here implies that because of the high debt and as such huge debt service payments, it is assumed that any future income accrued to potential investors would be taxed heavily by government so as to reduce the amount of debt service and this scares off the investors thereby leading to disinvestment in the overall economy and as such a fall in the rate of growth (Ayadi & Ayadi, 2008). According to Krugman (1988), accumulated public debt act as a tax onfuture output as well as reduces the incentive for savings and investment. In particular, the theory argued that the requirement to service debt reduces funds available for investment purposes; hence, a binding

liquidity constraint on debt would restrain investment and further retard growth. The theory holds that both the stock of public debt and its service affect growth by discouraging private investment. According to Obayori, Krokeyi and Kakain (2019), debt overhang states that in future, a country's debt will exceed the country's ability to repay. Therefore, the expected debt service will be an aggregate function of the output of the economy.

Solow-Swan Growth Theory

This growth theory was developed and introduced by Robert Solow and Trevor Swan in the 1950s. The theory is based on a supply-side, economic theory, which postulates long-run economic growth that outlines how a sustained rate of economic growth results from the combination of three driving forces: labour, capital and technology. The model initially considered exogenous population increase to determine the growth rate but, in 1957, Solow incorporated technological change into the model. The theory states that short-run equilibrium results from varying amounts of labor and capital in the production function. The theory also holds that technological change has a great influence on an economy and that economic growth cannot continue without technological advancements. While an economy has limited resources in terms of capital and labor, the contribution of technology to growth is unlimited. Thus, even though capital is very important, its increase has only a temporary and limited impact on increasing economic growth. As capital increases, the economy maintains its steady-state rate of growth, that is, because of diminishing returns to capital, economies will eventually reach a point at which any increase in capital will no longer create economic growth. Therefore, to increase the rate of economic growth in the Solow-swan model, there isneed for; firstly, an increase in the proportion of GDP that is invested. However, this is limited because a higher percentage of investment leads to diminishing returns and steady-state growth convergence. Secondly, technological progress which increases productivity of capital/labour can help countries overcome the steady state. The model assumes that the process by which countries continue to grow despite the diminishing returns is exogenous and represents a new technology that allows production with fewer resources. This is because technology augments capital and labour. Thus the Solow-swan theory suggests poor countries who invest more should see their economic growth converge with richer countries. This will encourage the inflow of resources and more technological improvement in the poorer countries. The influence of technology in this theory is such that increasing any one of the inputs shows the effect on GDP and, therefore, the equilibrium of an economy.

Empirical Literature Review

Didia & Ayokunle (2020) disaggregated total public debt into external debt and domestic debt to investigate whether these two forms of debt had a varying impact on the economic growth in Nigeria. Utilizing the Vector Error Correction Model (VECM) and data covering the period of 1980–2016, the study revealed that domestic debt had a statistically significant positive relationship with economic growth in the long run,while external debt exhibited a negative relationship with economic growth, which was not statistically significant. Udoh et al. (2020) used quarterly data from 2006 to 2018 to explore the influence of inter- generational debt burden on economic prosperity in Nigeria. The hypotheses were tested using the ARDL model. It was found that debt overhang and debt burden in Nigeria were due to the usage of borrowed funds into unproductive activities such as payment of salaries and allowances, which had hindered economic growth.

Mhlaba, Phiri and Nsiah (2019) employ the ARDL method and quarterly data from 2002 to 2016 to examine the long-run and short-run effects of public debt on economic growth for South Africa. The study modelled GDP as a function of gross and net debt, investment, inflation and terms of trade. The empirical results indicated a significant negative impact of public debt on economic growth. The study was based on South African data and provided a basis to examine the impact of government debt on economic growth from a Nigerian-specific perspective. Obayori, Krokeyi, and Kakain (2019) investigated the impact of external debt on economic growth in Nigeria for the period 1980 to 2016 using Generalized Method of Moments (GMM).

The GMM result revealed a positive and significant relationship between external debt and economicgrowth in Nigeria.

Ochuko and Idowu (2019) investigated the effect of national debts on economic enhancement in Nigeria from 1981 to 2018. The estimation showed that external debt contributed less to the Nigerian economy, while domestic debt significantly enhanced economic growth. On the other hand, debt servicing cost had a negative and significant influence on economic growth. Elom-Obed, Odo and Anoke (2017) using the Vector Error Correction Model (VECM) and annual data from 1980 to 2015, analyzed the relationship between public debt and economic growth in Nigeria. The study findings revealed a significant negative impact of foreign and domestic debt on economic growth in Nigeria.

RESEARCH METHODS AND PROCEDURE

This study employed annual secondary data between 1981 and 2021. The data used for the study were sourced from the Central Bank of Nigeria (CBN) and World Bank Development Indicator (WDI). External debt (ext), domestic debt (domdb), debt servicing (deser) and government consumption (govcon) were deflated/weighted by the real GDP. In other words, external debt is simply, external debt to GDP ratio. This interpretation applies to others that are so deflated. The debt relief dummy takes 1 from the first year of debt relief to the year in new the total debt stock exceed the amount of debt relief obtained. Other periods take 0. Recession dummy takes 1 for years that experience negative growth and 0 other wise.

Theoretical Framework and Model Specification

To set out the economic procedure for this work, we start with the theoretical framework. Following the neoclassical framework of Solow (1956) and Swan (1956), we assume that the economy is perfectly competitive with constant returns to scale production function. Perfect competition implies that there are numerous identical firms producing homogenous commodity, Y_j (with the assumption of single-product economy, the aggregate output is indicated as Y). In other words, j^{th} firm produces Y using capital, K_j and labour L_j. Following Keiichiro (2014) and Hennessy (2014), the aggregate production function will be specified as follows:

$$Y = AK^{\alpha}(ZL)^{\beta} \qquad 3.1$$

Where c $\quad Z = \dfrac{K}{L} \quad$ = labour efficiency

$A, \alpha, \beta > 0$ but $\alpha + \beta = 1$ and A is a scale parameter

Since the proportionality of labour efficiency, Z to capital-per-labour, K/L, implies that is Z endogenous to the economy, we plug $\quad Z = \dfrac{K}{L} \quad$ into (3.1):

$$Y = AK^{\alpha}\left(\frac{K}{L}.L\right)^{\beta}$$

$$Y = AK \qquad 3.2$$

Since factor market is perfectly competitive, and the supply of labour is inelastic, then L is exogenous to the economy. Now suppose government finances public consumption, C, through taxes, T and debts, D. It also pays interest, r, on the debt. Also, suppose public spending and debts are fixed proportion of the national income or aggregate output, then

$$E = \Psi Y; \quad dE/d\Psi = 0 \qquad \text{3.3}$$

and

$$D = \Phi Y; \quad dD/d\Phi = 0 \qquad \text{3.4}$$

Where Ψ and Φ refer to purchase ratio and public debt ratio respectively.

Naturally, the government pays rD as interest on D. On the other hand, with a flat tax rate,, the government imposes a tax on factor income and debt income such that:

$$T = \tau(Y + rD) \qquad \text{3.5}$$

Given that budget deficit, $\ddot{D}$, equals public debt, D, (this is based on the assumption that there is no existing debt or interest obligation), government budget constraint could be written as:

$$D + T = E + rD \qquad \text{3.6}$$

Plugging (3.3) to (3.5) into (3.6) yields:

$$\Phi Y + \tau(Y + rD) = \Psi y + rD \qquad \text{3.7}$$

$$Y = \frac{1}{\Phi + \tau + \Psi}(1 - \tau)rD \qquad \text{3.8}$$

Suppose we further assume that Ricardian Equivalence does not hold such that public debt dynamics affect the real sector, then Equation 3.8 reveals that changes in public debt ratio (, public debts (D) and debt interest obligation (r) would have a non-zero effect on the growth rate of national output, Y.

Suppose we set $\dfrac{(1 - \tau)}{\Phi + \tau + \Psi} = \beta_1$ and $rD = D$ (this identity presupposes that interest obligation is negligible).

Then, Equation 3.8 will become:

$$Y = \beta_0 + \beta_1 D \qquad \text{3.9}$$

Again, Hennessy (2014) noted that public debt could be sourced from external debt corridors (EXD) and domestic windows. Since Ar?abi?, Tica and Sonora (2018) opined that external and non-external debt sources could have asynchronous implication on economic growth; we rewrite Equation 3.9 as follows:

$$Y_g = \beta_1 EXD + \beta_{12} BD + \beta_3 DESEI \qquad \text{3.10}$$

Introducing time horizon and scaling the RHS sides by Y yields:

$$Y_g = \beta_1 ext + \beta_{12} domb + \beta_3 deser$$

Following Topalova and Nyberg (2010), we further make the above equation quadratic by adding external debt raised to the power of two. Also we add debt relief dummy, recession dummy and other control variables. In this regard, the specified in OLS framework is:

$$Y_g = \beta_0 + \beta_1 ext_t + \beta_2 ext_t^2 + \beta_3 domdb_t + \beta_4 deser_t + \beta_5 dbdum_t + \beta_6 recdum_t$$
$$+ \beta_7 govcon_t + \beta_8 cap_t + \beta_9 lab_t + \varepsilon_t$$

Where Yg = economic growth, ext = external debt, omdb = domestic debt, deser = debt servicing, cap = capital accumulation, lab = labour and govcon = government consumption. Other variables include debt relief dummy (dbdum). This variable captures the period that Nigerian was given debt relieve by the Paris club. The effect of recession on the economy was captured using recession dummy (recdum).

PRESENTATION OF RESULTS

In this section, the econometric results are presented, analyzed and discussed. Before the estimation of the hypothesized models, the time series properties of the series are examined. To achieve this, we evaluate the stationary of the data. As noted by Grififth,Chater, Norris, and Pouget (2012) the phenomenon of stationary stochastic processes is central in data analysis and empirical estimations, especially in time series econometrics. Two views are present: the case where all the variables are stationary at the same order of integration before estimation is undertaken and the case where variables of different stationarity orders can also be estimated Grififth et al (2012). Therefore, robust estimations require unit root analysis, especially when the time series are in levels.

Table 4.1 Results of Unit Root Test

Variables	Elliott, Rothenberg and Stock Test		NG-Perron Test	
	ERS DF-GLS Test Statistic	Comments	MZt Statistic	Comment
extdb_1	-2.37	1(0)***	-2.04	I(0)**
extdb_2	-1.97	1(0)**	-1.99	I(0)**
Domdb	-1.95	1(0)**	-1.98	I(0)**
Dser	-2.22	1(0)**	-1.99	I(0)**
db_dum	-1.98	1(0)**	-1.99	I(0)**
rec_dum	-2.30	1(0)**	-1.98	I(0)**
Govcons	-1.96	1(0)**	-1.97	I(0)**
Cap	-1.97	1(0)**	-1.99	I(0)**
Lab	-1.97	1(0)**	-1.99	I(0)**
Int	-1.98	1(0)**	-2.10	I(0)**
Exr	-2.25	1(0)**	-1.99	I(0)**
Inv	-3.95	1(0)***	-1.99	I(0)**
Ecog	-2.06	1(0)**	-1.92	I(0)**
Asymptotic Critical Values				
1%	-2.62	1%	-2.580	
5%	-1.94	5%	-1.980	
10%	-1.61	10%	-1.620	

*Note: ***, ** and * indicate significance at 1%, 5% and 10% levels respectively*

MZt is the modified transformation of the t-statistic of the Ng-Perron test. MZt is used MZt =MZa*MSB. Lag length: (Spectral GLS-detrended AR based on SC, Maxlag =9): with a constant.

In this work, the independent and dependent variables used are weighted using GDP so as to obtain ratios while others are in growth rates. As in many cases, trends are removed by working with ratios and growth rates (Wickremasinghe, 2014). The unit root test was carried out using Elliott-Rothenberg-Stock DF-GLS unit root test proposed by Elliott, Rothenberg and Stock (ERS, 1996). Although ADF and Phillip-Perron test procedures have been the workhorse techniques, recent literature argues that both techniques suffer finite sample power and size problems (Wickremasinghe, 2014). To provide sufficient assurance on the results, we also implemented a confirmatory test using NG-perron technique. The results obtained are shown on Table 4.1. The results obtained show that all variables are stationary at levels, at least at 5% significance level. The kind of result we obtained corroborate Grififth et al (2012) claim that weighted series are usually integrated at levels. This implies that there is no need to perform cointegration test.

The econometric result of growth estimation is presented on Table 4.2. Given that the baseline estimation of the growth model exhibits reserve causality, we further employ the system of generalized method ofmoment (GMM). The reverse causality follows from the fact that although public debt drives economic growth, economic may in turn drive public debt, especially at low levels of growth trajectory. This reverse causality entrenches the endogeneity problem, which according to Grififth et al (2012) can be solved using GMM procedure. Therefore, although we presented both the GMM and the baseline results, only the GMMis interpreted. To test the debt overhang hypothesis, we employ the threshold effect. Technically speaking, debt overhang is said to exist if the debt-growth relationship is an inverted U-shape as depicted in figure 4.1. In other words, as debt increases, the growth of the GDP rises to a certain point (or threshold) beyond which further increase in debt leads to decrease in the growth of the economy. First, following Topalova and Nyerg (2020), we establish threshold debt from the growth estimation of Table 4.2using external debt. In this approach, it is required that the growth estimation is a quadratic function in external debts. Second, it is required that the sign of first-degree external debt and second-degree external debts alternates. To ascertain the threshold debt level, the partial derivative would be taken with respect to external debt.

Table 4.2: Result of Growth Estimation

growth	Baseline Regression		GMM Estimates	
	Coefficient	Standard error	Coefficient	Standard error
extdb_1	0.0935***	0.015583	0.06367***	0.02842
extdb_2	0.085333***	0.017417	-0.09458**	0.042833
domdb	0.476333***	0.0545	0.527833***	0.125417
Dser	-0.02116***	0.002841	-0.023417**	0.01001
db_dum	-0.01292***	0.003417	0.014333**	0.0065
rec_dum	0.164667***	0.0375	0.182417*	0.092167
govcons	0.559083***	0.19525	0.046958**	0.020617
Cap	-0.00392***	-0.001	-0.00325***	0.00125
Lab	0.008**	0.004	0.006667	0.005
C	0.016667***	0.002167	0.014**	0.003333
Autoregressive lag AR			0.028	0.009
diagnosis				
R-square	99.83		78.9	
DW	2.56		1.78	
J-stat			22	0.009

Source: Regression Result Obtained by the Researcher Using Stata

From the result shown on Table 4.2, the effect of external debt on growth is positive while the effect of the square of external debt to growth is negative. The alternating of signs shows that there is turning point in the contribution of external debt to economic growth over the study period. Also, both variables are significant at 5% level of significance. Taking the partial derivative of the growth estimation, the threshold external debt is 38% of GDP. In other words, if external debts are below 33% of GDP, it is expected to contribute positively to long run growth. The coefficient of external debt is 0.0737 indicating that if external debt increases by 1%, economic growth will increase by 0.07%. On the other hand, the coefficient of the square of external debt is -0.0946 indicating that every 1% increase in external debt beyond the threshold will reduce growth by 0.09%. Our findings corroboratePresbitero (2018).

Other debt variables included are domestic debt and debt servicing. The coefficient of domestic debt and debt servicing are 0.5278 and -0.023 respectively indicating that both variables contribute significantly to economic growth. However, while raising external debt by 1% , raises growth by 0.527%, raising debt servicing by 1% leads to decrease in economic growth by 0.023%. While domestic debt represents borrowing of idle fund own by private agents and injecting it into the spending stream which works as afiscal stimulus, debt servicing is largely represents withdrawal of spendable fund from the spending stream. Fund uses to service debt could be used alternatively for other productivity purposes. The high opportunity cost associated with debt servicing could hamper the economy.

Table 4.3 Result of Investment Channel of Debt Overhang

Invest	Baseline Regression		GMM Estimates	
	Coefficient	Standard error	Coefficient	Standard error
extdb_1	0.00407***	0.001473	0.0052**	0.002167
extdb_2	-0.00832**	0.00364	-0.01057	0.002327***
Domdb	0.017333**	0.007887	0.022187	0.01118*
Dser	-0.01309**	0.005807	-0.016727	0.008407*
db_dum	0.034667***	0.011873	0.044373	0.01716***
rec_dum	0.1898***	0.06292	0.242927	0.096113**
Govcons	0.23764***	0.038913	0.226027	0.06474***
Int	-0.26858***	0.082247	-0.255493	0.10391**
Exr	0.282447***	0.051653	-0.268667	0.09646***
C	0.528233***	-0.15123	0.502493	0.21745**
Autoregressive lag AR			0.184167	0.083373**
diagnosis				
R-square	99.2		84.5	
DW	2.53	0.0104	1.68	
J-stat			19.01	

Source: Regression Result Obtained by the Researcher Using Stata

Other variables in our model include debt relief dummy, recession dummy, labour and capital. The debt relief dummy captures the intervening the effect of debt relief which Nigeria experienced around mid-2000. Also, the recession dummy captures the effect of recession on the long run growth. Labour and capital are fundamental variables in the neoclassical growth accounting frameworks.

In the estimated investment model, interest rate seems to show the normal negative impact (0.255) on private investment. This contradicts the idea that the interest rate should be allowed to be determined by the market in the McKinnon-Shaw proposition, where they propose that higher interest rate leads to higher

savings and consequently higher private investment. In this line, one of the main goals of the Monetary Policy Committee of the CBN is to guide the market in setting the prime rate as the benchmark for financial institutions to respond. The result obtained also corroborates Presbitero (2018).

Optimal growth-Optimizing public debt threshold

Since the study focuses mainly on the relationship between public debt sustainability, debt overhang and economic growth, a bivariate model was estimated to examine the optimal growth-maximising public debt threshold. Here we employ the composite debt stock. To ascertain the threshold, we can take the total derivative of the growth equation in equation 4.1. The plot of the function also assists in determining the existence of a Laffer-curve type relationship, where public debt contributes to economic growth up to a certain point (optimal threshold). This optimal point is 36%. After this point has been reached, further increases in public debt would start to have a negative effect on growth. The estimated quadratic bivariate equation is shown Equation 4.1 while the plot from the econometric results is shown in Figure 4.1.

$$Y_g = \underset{(0.0190)}{0.0523} DEBT - \underset{(0.0189)}{0.07122} DEBT^2$$

$R^2 = 0.781 \qquad DW = 1.89$

The chart in Figure 4.1 depicts a concave or inverted U-shaped relationship between economic growth rates and the public debt-to-GDP ratio. The results suggest that Nigeria achieved higher growth rates when the public debt-to-GDP ratio was around 30 and 40 per cent, and the growth gains are maximized when debt-to-GDP ratio hit 36%. Assuming that the past provides a reasonable guide to the future, the 30%-40% range could be considered an optimal growth-maximizing public debt threshold for Nigeria. The results also confirm the debt overhang hypothesis found in the earlier debt-growth estimates. This estimated public debt ratio is within the 38 per cent public debt-to-GDP ratio calibrated by the IMF and World Bank (2021) for low-income countries rated weak in terms of country performance and institutional assessment (CPIA).
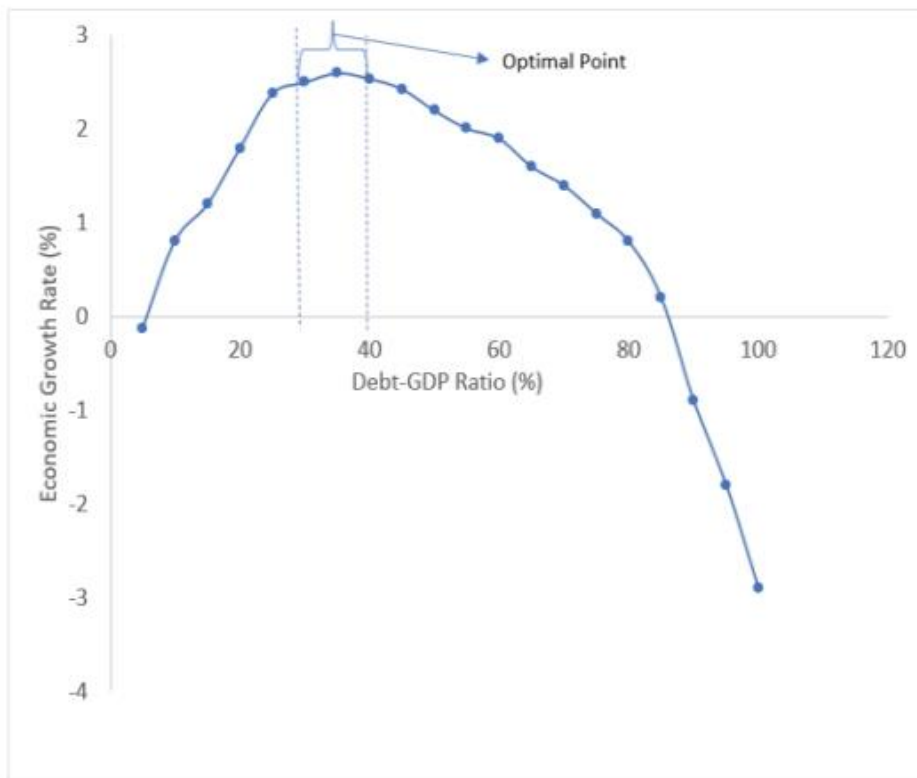

Figure 4.1 Plot for Growth-Debt-to-GDP ratio nexus

POLICY IMPLICATION AND CONCLUSION

The main thrust of this study is to ascertain the optimum public debt threshold and the prevalence of debt overhang in Nigeria. The study established that debt overhang exists with inverted U-shaped debt Laffer curve. The threshold range is 30%-40% while the threshold benchmark is 36% for composite debt stock and 33% for external debt stock. This finding has several implications for public policy. First, cheap public debt obtainable from some countries such as China and some bilateral agencies are not honeymoon fund. They have growth implication. This suggests that one of the considerations for approving debt borrowing is the check whether the accumulated debt has reached the threshold. This is because beyond the threshold, debt hurts national economic growth. Second, increasing debt servicing portends a great dis-utility to the macro economy. It hampers investment as well as economic growth. Third, the idea that high interest rate attracts loanable funds and enhances investment and growth is not supported by our result. In other words, the McKinnon-Shaw hypothesis may not be valid after all. In this regard, it would be more rewarding for the CBN to continue setting the interest rate bench market. Fourth, the investment channel of debt overhang effect holds. In other words, when debt overhang characterizes an economy, there is marked decline in investment.

Based on the findings, we make the following conclusions. The Nigerian government should ensure optimal utilization of external debt to avoid crowding out of investments and also any possible existence of debt overhang. Also, it should continue to strive towards attaining minimal debt burden through economic and political stability. The nation's productivity can greatly be enhanced, when external debt is acquired for economic reasons rather than social or political reasons. Finally, given the prevalence of debt overhang syndrome in the Nigerian macro economy, debt borrowing for unproductive government spending would be counterproductive.

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