Nigeria's Debt Burden and Development Tangle

Peter. A. Oti[1]

[1] University of Calabar, Calabar,Nigeria

Abstract

The main purpose of this research is to empirically ascertain the nexus of Nigeria?s debt burden and development tangle. In order to embark on this exercise, relevant data were sourced from Central Bank of Nigeria statistical bulletin and National Bureau of Statistics fact book spanning the years (1980-2014). The Johansen test for the co-integrating association corroborates that a long run dynamic equilibrium link exists between economic development and debt stocks, and the Granger Causality result shows that the various debt stocks granger caused the performance of the Nigeria?s economy. On the basis of our findings and conclusion thereof, and in the light of the need to encourage and promote economic development, a strategy that exercises tense embargo on fresh loans and advances should be put in place and the government should try by all means to reduce the quantum of public debt as well as its total eradication via debt buy back, total cancelling of the debt or complete repudiating of the debt stock. Policies that will promote increase in the volume of commodities export should be put in place by the government, which will boast earnings from foreign exchange and hence help to eliminate the huge deficit in the revenue account of the federation.

1 Introduction

he public debt and economic growth nexus has not been encouraging as the debt GDP ratio has been on the increase resulting in huge debt burden annually. In economic theory, it is believed that reasonable levels of borrowing by a developing economy are likely to enhance its economic performance (Pereira & Xu, 2000). When a nation's economic growth is enhanced, the poverty level is likely to be affected positively (Amakom, 2003). There remains deep divergent view among scholars on the role of external finance in the economic development process. One view of economic theory stresses the productive impact of public debt as a necessity to augment domestic savings, stimulate investment and promote growth. The argument here is that the conversion of borrowed funds into capital assets and other required raw materials will lead to economic growth and development as it will boost the productive sectors of the economy. A counter opinion is that the accumulation of debts triggers a steady depletion of economic assets out of the government coffers through the means of debt service commitments, which could have been applied to development projects and upgrade of national infrastructure (Ekperiware & Oladeji, 2012). It is of the expectation that as debt commitment soar, the earnings of the domestic economy from exports will shrink as reasonable chunk of the resources from the exports are diverted to servicing the debt. The reduction in export earnings due to its diversion in debt servicing will indirectly affect public sector spending and which will impact on economic performance negatively (Chinaemerem & Anayochukwu, 2013). The damaging impact of public debt burden on growth mostly centers on the mismanagement and ineffective utilization of these loans to the disadvantage of the economy. According to Soludo (2003), when public debt reaches a certain threshold, its effect turns adversarial as debt servicing explodes and nations will find themselves on the negative side of the debt Laffer Curve, with debt undermining public revenue, crowding out private sector investment and retarding

economic development process. It is also the belief of some scholars that the developed economies manipulate the economies of developing economies to ensure that they perpetually remain borrowing.

The Nigerian government appeared to have paid-off much of its debt in 2006 to free up funds for economic development. However, the growing resort to external loans to finance public expenditure in recent times and the dwindling oil revenue has raised concerns about the prospect of a return to a debt overhang scenario in the near future. The effect of a precipitous decline in the price of oil in the global market has placed Nigeria in the mesh of sort. First, the drop in crude oil revenue will make it difficult for the country to service its debts and force the country into more borrowing.

Hence, this study will help to establish the relationship between Nigeria's debt burdens or exposure and development tangle from 1980 to 2014. Section I is the introduction, section II discussed the literature while the methodology is captured in section III. Sections IV and V presents the findings and the conclusion and recommendations respectively.

2   II. Literature Review and Theoretical

Framework a) Theoretical Framework Debt overhang thesis is the theory that underpins this work. The debt overhang theory provides a new dimension to the growth-debt crisis, and the basis of this theory is that, if the level of a country's borrowing is over and above its capacity to pay, the expectation is that the debt servicing commitments will lead to a drain in the debtor's country output, thereby increasing the country debt burden, i.e. liquidity crisis. According to the debt overhang theory, high debts leads to anticipation of foreign taxation, reduce private sector incentive for savings and investment as well as promote outflow of capital from the domestic economy (Patillo, Poirson & Ricci, 2002). This theory purports that accumulation of high stock of public debt would lead to reduction in economic growth and tangle developmental efforts through the channels of reduced public revenue and investment expenditure. It maintains that debt accumulation stimulates growth initially but when it exceeds the debt sustainability threshold, the debt accumulation effect will intensify through liquidity constraint while debt servicing commitment diminish the earnings from exportation within the public sector for expenditure and by this means undermining economic development.

3   b) Nigeria's Debt Burden and Exposure

Obadan (2004) opined that Nigeria started experiencing external debt challenges from the early 1980s, due to falling oil prices in the international market which caused a reduction in foreign exchange earnings. The increase in Nigeria's loans and advances from the international capital market, multilateral institutions, increase back lock of foreign trade arrears, defaulting charge on over-due loans, recapitalization of outstanding interest liabilities and bilateral sources as well as the depreciation of the Naira, jointly increased the volume of Nigeria's foreign debt over the years. Most of the loans taken by the Nigerian government, particularly in the pre-SAP era were contracted to finance developmental projects, and it was during this period that Nigeria began to borrow to support the balance of payments crisis. The subsequent governments as results of the exposure to external borrowing started the era of reckless borrowing from the external sources and which today has become a ritual. According to Mbanwusi (2011), this has resulted in high deterioration of external debt profile and generated payment crisis, thus creating the need for debt refinancing, rescheduling and restructuring.

The economic growth trajectory of a nation is impeded by high debt profile. The burden of principal and interest payments, for example, reduces the country's resources and lessens the expenses of the government on other productive economic activities ??Obadenmi, 2013). According to Ayadi (2003), external debt exposure and its attendant obligations had drastically limited developing countries' participation in the world economy and the attendant debt servicing commitments continue to manifest as a hindrance to economic growth and development. Regrettably, one of the greatest challenges faced by most sub-Saharan African countries is the problem of ascertaining the amount of their external indebtedness. Between 1980 and 1990, Nigeria's external debt rose from N2.3billion to N633.1 billion with the increase in external debt/real gross domestic product ratio higher than the sustainability threshold. The ratio of total debt to gross domestic product which captures debt burden rose from 19.9% in 1980 to 108.2% in 1994 but plummeted between 53.5% in 1995 and 32.5% in 1997. The debt burden shows upward movement again from 1998 to 2006. The burden decreased thereafter due to the debt relief granted the country in 2006 amounting to over $18billion. Within the period under review, the debt burden threshold is above 30 percent which negates the standard of debt sustainability hence resulting in debt overhang. It is further revealed that Nigeria's debt burden falls within the threshold between 1980 and 1982 but started increasing from 1983 due to the oil crisis and the implementation of the SAP-induced debt strategies. The increase in domestic debt burden has led to the crowding-out of investment mostly in the private sector of the economy. On the whole, the domestic debt burden has been sustainable over the years from 1994 to 2014. The upward trend in total debt stock started in 1986 as a result of the SAP-induced policies but reduced from 2006 as a result of the relief. The increase was accumulated thereafter bringing the total stock of over 35 percent of gross domestic product in 2014. The external debt stock increased from N2.3 billion in 1980 to N328.5 billion in 1990, N3176.3 billion in 2000 and N896.8 in 2010, respectively. It increased further to N1631billion in 2014 representing about 41.8 percent of the real GDP ratio, thereby compounding the tragedy of exposing the country to external shocks occasioned by the external debt overhang thesis. The main causes range from fiscal

imbalances, inadequate growth in gross domestic product and excessive government spending, persistent hike in the general price level as well as the shrink in public revenue since the beginning of the oil crisis of the early 1980.

In the 2016 Nigeria's budget estimates with N2.2trillion deficit, it is expected to be financed mostly from borrowing. The deficit which is 36.5 percent of the total budgeting estimate will be financed by a combination of domestic borrowing of N984 billion and foreign borrowing of N900 billion totaling N1.84 trillion, thereby hedging additional burden on the economy, reducing the revenue volume and undermining the overall development of the country.

4 c) Empirical studies

Some empirical researches have been done on the relationship between public debt and economic growth and development in developing economies. Some scholars such as Ajayi (1991); Adam (2004); as well as Iyoha (1999) argued that economic growth and development have been impeded over the years due to heavy amount of scarce economic resources diverted to the servicing of public debt commitment in third world countries. Conclusively, they opined that the speedy increase in the stock of external debt as well as the debt servicing commitments seriously hinders the performance of the economy as a large volume of the current resources was being deployed to servicing debts accumulated in the past with little left for fresh investments.

Obademi (2013), on the study of "external debt and Nigeria's economic growth nexus, matters arising", using simple regression analysis of the ordinary least squares revealed that external debt and debt service payment have negative and positive impact respectively on economic growth. He recommended that in view of the negative impact of debt burden to economic development, cost-benefit analysis, projects prioritization, absorptive capacity of the economy, productive self-financing investment, accountability as well as probity in handling government resources and debt sustainability should form the fundamental standards for contracting domestic or external loans and advances. Mbanwusi (2011) carried out a critical analysis on foreign debt management and Nigeria's debt profile between 1999 and 2007. Employing qualitative descriptive method of data analysis, it was found that Nigeria's debt looked sustainable in relation to GDP if properly managed within a certain given threshold.

Using the neo-classical model of economic growth Adegbite, Ayadi & Ayadi (2008) explored the nexus of external public debt and Nigeria's economic performance. They employed the ordinary least squares (OLS) techniques and found that inverse relationship exist between external debt and external debt commitment and economic performance. Similarly, El-Mahdy & Torayeh (2009) employing the co-integration technique in Egypt between 1980 and 2006 concludes that a robust negative relationship exist between external debt and economic development in the country.

In the same vein, Qureshi & Alli (2006) carried out an empirical study to determine the relationship between public debt and economic growth of Pakistan from 1981 to 2008. Their findings revealed that public debt impact on economic growth negatively. The causal nexus of public debt and growth performance was equally investigated by Tajudeen (2012) using VAR modeling technique. The results revealed that the direction of causality was bi-directional between economic growth and public debt in Nigeria.

Izedonmi & Ilaboya (2012) investigated empirically the relations that exist between debt and economic growth in Nigeria. They used data spanning 1980 to 2010 and concludes that inverse relationship exist between public debt burden, debt servicing commitments and economic performance.

5 III.

6 Methodology

The study is designed in such a manner that requires an econometric investigation of the relationship between Nigeria's debt burden or exposure and development tangle, using Augment Dickey Fuller (ADF), test, Granger Causality test, Johansen test and error correction model (ECM). The data for the study were obtained mainly from secondary sources, particularly from the Central Bank of Nigeria (CBN) Statistical Bulletin and National Bureau of Statistics

7 a) Model specification

The model of this study which is based on the debt overhang thesis is developed to access the dynamic relationship between debt burden and economic development tangle in Nigeria between 1980 and 2014. The model is specified below: RGDP = F (EXTD, DOMD, EXDB, DDB, TD, TDGDP)

The above equation can be defined econometrically as below:

IV.

Analysis and Discussion of Results The graphical illustration presented in figure 1 above indicates that the ratio of total debt to gross domestic product (TDGDP) which captures debt burden trended positively with the Nigeria's real gross domestic product (RGDP) between 1980 and 1994 but decreases between 1995 and 1997. The debt burden shows upward movement again from 1998 to 2006. The burden decreased thereafter due to the debt relief granted the country in 2006. Within the period under review, the debt burden threshold is above 30 percent which negates the standard of debt sustainability hence resulting in debt overhang. debt burden has led the crowding-out of investment mostly in the private sector of the economy. On the whole, the domestic debt

burden has been sustainable over the years from 1994 to 2014. The total debt stock as shown in the figure 3 indicates that the volume of debt has rising with economic development proxied by real gross domestic product (RGDP). The upward trend in total debt stock started in 1986 as a result of the SAP-induced policies but reduced from 2006 as a result of the relief. The increase was accumulated thereafter bringing the total stock of over 35 percent of gross domestic product in 2014. The trend between total domestic debt and Nigeria's economic development is shown in figure 4 above. It reveals that total domestic debt increase marginally between 1980 and 1986 but became high thereafter and continued to move upward to reach 28.8 percent of real gross domestic product in 2014. In the above figure 6, it is observed that the Nigeria's external debt burden rises with the gross domestic product. The total debt increased alongside with the external debt volume thereby causing a huge external debt burden and exposed the country to external shocks occasioned by the volatility in the total debt GDP ratio. In Nigeria, several factors have been advanced to explain the cause of the escalating debt profile. The main causes range from fiscal imbalances, inadequate growth in gross domestic product and excessive government spending, persistent hike in the general price level as well as the shrink in public revenue since the beginning of the oil crisis of the early 1980s, which is demonstrated in the above trend.

8 i. Unit Root Test

In ascertaining the characteristics of time series variables, a preliminary analysis is to test for the presence of unit root in the series. This is important since we are ignorant of the data generating process. The Augmented Dickey Fuller (ADF) unit root test was applied and the result shown in table 1 below:

9 Source: Authors' Computation using E-views

The empirical results of the unit root test using Augmented Dickey Fuller at 5 percent level indicates that all the variables were not stationary at levels but became stationary after first differencing, hence the variables have unique order of integration. This conclusion is based on comparison of the Augmented Dickey Fuller statistics and the critical values provided by **??**ackinnon (1996). Hence, this permit us to carry out the Johansen's co-integration test designed to determine whether a common stochastic drift exist among our time series variables.

10 L. R: Test indicates two co-integrating equation at 5% level of significance

The above co-integration result in table 3 on the relationship between RGDP and DDB, DOMD, EXTD, EXTDB, TD, TDGDP, based on the maximum Eigen value shows that the variables are co-integrated at 5 percent level of significance since there are two cointegrating vector. Hence, there is a meaningful long-run relationship among the variables in the stochastic model. On the established relationship between real gross domestic product (RGDP) and debt exposure variables such as total debt/gross domestic product (TDGDP) ratio, total debt stock (TD), domestic debt (DOMD), domestic debt burden (DDB), External debt (EXTD), external debt burden (EXTDB) and one year lag value of real gross domestic product RGDP(-1) showed in table above, the adjusted coefficient of determination of 0.988781 indicates that about 98 percent of the changes in real gross domestic product is accounted for by the various debt profile, leaving only 2 percent for the unexplained variables not captured in the estimated model and hence has high explanatory power. The explanatory variables are rightly signed indicating positive relationship between economic growth and the various debt profile-real gross domestic product one year lagged value, domestic debt burden, external debt and total debt stock being statistically significant. The speed of adjustment from short-run to long-run equilibrium is slow but negative and statistically significant as showed by the error correction model (ECM). The Durbin-Watson value (1.927420) falls in the critical region showing that serial correlation does not exist in the estimated model.

11 V. Conclusion and Recommendations

The main objective of this study is to empirically investigate the relationship between Nigeria's debt burden and development tangle. The study emphatically ascertained the relationship between debts and development. In order to embark on this exercise, annual time series data from Central Bank of Nigeria and National Bureau of Statistics for the period of 34 years (1980-2014) were employed. The Johansen Cointegration test confirmed that a long run dynamic equilibrium relationship exists between economic development and debt stocks, and the Granger Causality result shows that debt stocks granger caused economic development in Nigeria. On the basis of our findings and conclusion thereof, we recommends that; a strategy that exercises tense embargo on fresh loans and advances should be put in place and the government should try by all means to reduce the quantum of public debt as well as its total eradication via debt buy back, total cancelling of the debt or complete repudiating of the debt stock. Policies that will promote increase in the volume of commodities export should be put in place by the government, which will boast earnings from foreign exchange and hence help to eliminate the huge deficit in the revenue account of the federation. The authorities saddled with the responsibilities of managing public debt should be steadfast in their drive for a sustainable debt management strategy than the SAP-induced strategies which delved on only differing the payment days but continued to perpetrate absolute poverty and inequality in third world nations. The moral tenet of fiscal produce in managing public debt should be enshrined. The country

need to consolidate on the gains of the recent debt relief granted her and the diminution in total outstanding debt profile. The major ways to do this should be consistency in the application of prudent debt management framework, prudent borrowing only for self-liquidating projects, and regular debt servicing commitment as well as outright liquidation of all outstanding debt liabilities. The vulnerability of the Nigerian economy to external shocks as a result of the overriding debt burden as well as the dwindling oil revenues is an indication that we need to curtail the margin of borrowing and diversify the non-oil sector for sustainable economic growth and development. [1] [2] [3] [4]

Figure 1: Figure 1 :

[3] BNigeria's Debt Burden and Development Tangle

[4] Nigeria's Debt Burden and Development Tangle

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Figure 2: Figure 2 :Figure 2 1 B
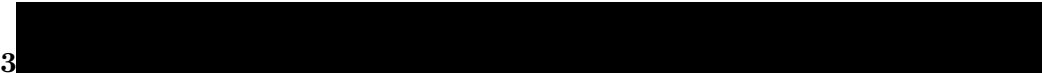
3

Figure 3: Figure 3 :

1

Figure 4: Table 1 :

2

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.979035	251.7724	124.24	133.57	None **
0.847317	124.2306	94.15	103.18	At most 1 **
0.562086	62.21067	68.52	76.07	At most 2
0.413446	34.96146	47.21	54.46	At most 3
0.309235	17.35627	29.68	35.65	At most 4
0.117545	5.147718	15.41	20.04	At most 5
0.030470	1.021159	3.76	6.65	At most 6

Figure 5: Table 2 :

3

Null Hypothesis:	Obs	F-Statistic	Probability
DDB does not Granger Cause RGDP	34	0.63980	0.42987
RGDP does not Granger Cause DDB		0.17372	0.67970
DOMD does not Granger Cause RGDP	34	12.4996	0.00130
RGDP does not Granger Cause DOMD		2.85384	0.10119
EXTD does not Granger Cause RGDP	34	0.00132	0.97130
RGDP does not Granger Cause EXTD		0.07168	0.79068
EXTDB does not Granger Cause RGDP	34	0.19678	0.66042
RGDP does not Granger Cause EXTDB		1.76436	0.19378
TD does not Granger Cause RGDP	34	0.21099	0.64920
RGDP does not Granger Cause TD		4.42165	0.04370
TDGDP does not Granger Cause RGDP	34	0.24517	0.62399
RGDP does not Granger Cause TDGDP		0.85009	0.36365

Figure 6: Table 3 :

226 [Sources: CBN ()] , *Sources: CBN* 2014. 2014. (NBS)

227 [Amakom ()] *A conceptual approach to the analysis of external debt of developing countries*, R Z Amakom . 2003.
228   Washington; DC: World Bank. (World Bank Staff Working Paper 421)

229 [Cbn ()] Cbn . *Proceedings of the 10th annual conference of the Zonal Research*, (the 10th annual conference of
230   the Zonal ResearchLagos) 2000. p. .

231 [Imf ()] *Debt Servicing to Gulp 35% Of Nigeria's Revenue*, Imf . 2015.

232 [El -Mahdy and Torayeh ()] 'Debt sustainability and economic growth in Egypt'. A M El -Mahdy , N M Torayeh
233   . *International Journal of Applied Economics and Quantitative Studies* 2009. 6 (1) p. .

234 [Iyoha ()] 'External debt and economic growth in Sub-Saharan African countries: An econometric study'. A M
235   Iyoha . *African Economic Research Consortium. Nairobi* 1999. p. .

236 [Obademi ()] 'External debt and Nigeria's economic growth nexus: Matters arising'. O E Obademi . *Journal of
237   Poverty, Investment and development* 2013. 5 (2) p. .

238 [Obadan ()] *External Sector Policy. Bullion, a publication of the Central Bank of Nigeria*, M I Obadan . 2004.

239 [Pereira and Xu ()] 'Foreign assistance & economic development'. H B Pereira , A Xu . *American Economic
240   Review* 2000. 56 p. .

241 [Tajudeen ()] 'Foreign debt and economic growth: An analytic re-examination'. F Tajudeen . *CBN Economic
242   and Financial Review* 2012. (3) p. 36.

243 [Mbanwusi ()] *Foreign debt management and Nigeria's debt profile 1999-2007 Unpublished M.Sc thesis submitted
244   to*, C U Mbanwusi . 2011. Nsukka. Department of Political Science University of Nigeria

245 [Adam ()] *Foreign debt, economic growth, and Nigeria's debt servicing capacity; Doctoral dissertation*, J A Adam
246   . 2004. University of Ibadan

247 [Ayadi (ed.) ()] *Investment adjustment mechanism and external debt burden in a developing economy*, F S Ayadi
248   . Nwankwo, S. etal., (ed.) 2003. Sheffield Hallam University Press. ((Editors) Dimensions of African Business
249   & Development)

250 [Ajayi ()] *Macroeconomic approach to external debt: The case of Nigeria: Nairobi AERC (African Economics
251   Research Consortium*, S I Ajayi . 1991. (Research Paper 8)

252 [Patillo et al. ()] C Patillo , L Ricci , H Poirson . *External debt and growth" IMF Working Papers 02/29*,
253   (Washington) 2002.

254 [Ekperiware et al. ()] 'Private investment and external debt: is the debt overhang hypothesis relevant to
255   Nigeria?'. M C Ekperiware , S I Oladeji , ; , H Egwaikhide , F . *The Nigerian Journal of Economic and
256   Social Studies* 2012. 1998. 40 (1) p. . (External debt relief and economic growth in Ekpo)

257 [Izedonmi and Ilaboya ()] 'Public debt growth dynamics: The Nigerian experience'. F I O Izedonmi , O J Ilaboya
258   . *JORIND* 2012. 10 (3) p. .

259 [References Références Referencias] *References Références Referencias*,

260 [Soludo ()] C C Soludo . *Debt, poverty and inequality" in Okonjo-Iweala, the debt Trap in Nigeria*, 2003. Africa
261   World Press NJ. p. .

262 [Cbn ()] *Statistical bulletin*, Cbn . 2014.

263 [Jegede ()] *The impact of external debt on economic growth and public investment: The case of Nigeria: (IDEP)
264   Dakar Senegal*, I Jegede . 2014.

265 [Chinaenewem and Anayachukwu ()] 'The impact of external debt on economic growth: A comparative study of
266   Nigeria & South Africa'. F U Chinaenewem , O Anayachukwu . *Journal of Sustainable Development in Africa*
267   2013. (10) p. 3.

268 [Adegbite et al. ()] 'The impact of Nigeria external debt on economic development'. E O Adegbite , F S Ayadi ,
269   F Ayadi . *International Journal of Emerging Markets* 2008. 3 (3) p. .