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The Nexus Between Subnational Debt and Economic Development in Nigeria

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Abstract

The study has the objectives of examining the impact of sub- national debts on economic development. The study covered the period of 1996 to 2018 and data were sourced from Central Bank of Nigeria and Debt Management Office. The study adopted the Fully Modified Ordinary Least Squares and Granger Causality. The Fully Modified OLS was used to investigate the both long run and short run relationships while the Granger Causality was used for direction of causality. The result showed that state government has a statistically significant positive relationship with the growth rate of GDP while Local government debt (LDEBT) and exchange rate had a significant inverse relationship with the growth of GDP. The Interest rate (INT) has positive sign but not significant. The paper recommended that the Federal Government of Nigeria should ensure that fiscal discipline should be enshrined to curtail diversion of loans received to unproductive channels.

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INTRODUCTION

Recent momentous discourse of subnational insolvency in the global space reinforces the continuing validity of subnational debt management principles and its relevance to contemporary issues and problems of economic development. Subnational debt is conterminous to a '' Knife Edge'' innovative fiscal financing mechanism capable of invigorating social welfare benefits when employed for productive investment while triggering a chaotic macroeconomic environment when raised beyond certain permissible optimal threshold. The tripartite challenge for debt management experts and policy analyst becomes the implementation of polices that guarantees the congenial achievement of subnational borrowing autonomy while preserving subnational fiscal sustainability and assuring cohesion in national development.

Proponents of subnational debt argue that decentralization of borrowing contribute to enhancing expenditure efficiency (Sow and Razafimahefa, 2015, Fretes Cibils and Ter-Minassian, 2015).Evidence from developed economies shows that this seems to be particularly the case in social sectors such as education and health (Ahmad et al, 2008). Accordingly, Steiner (2007) posited that National development and poverty alleviation often hinges on subnational growth and service delivery.

Subnational borrowing is incurred to undertake varied infrastructure investment needs required to achieve a quantum leap in developmental strides and meet needs at the local level, including utilities, transportation, health, education and environmental protection. Furthermore, rapid urbanization in developing countries is requiring large-scale infrastructure financing to help absorb influxes of rural populations (Canuto, O and L. Liu, 2017).

Cynics affirm that subnational borrowing is capable of exacerbating macroeconomic disturbance consequently constraining the ability of subnational units/governments to meet their financial obligations and there could be serious shortcomings that policymakers should be aware of in designing decentralization policies (Breton 2002; Crook, 2003). Government accountability and allocative efficiency may not be achieved with decentralization when the scarcity of public sector administrative, financial and managerial capacity is more problematic at the lower levels of government (Crook, 2003; Collier, 2008). Furthermore, the prevailing budgetary stringency, inimical sub national debt control frameworks, porous institutional capacity, mismanagement of Subnational debt, the history of subnational government defaults, give central governments substantial raison d'être to antagonize subnational government debt autonomy. Decentralization may impose constraints to the implementation of national policies and the creation of coordination channels across regions (Guldner, 1995). Endemic poverty, compounded in many developing countries by an onerous sub national debt burden, is today a major destabiliser of national developmental policies.

That Notwithstanding, granting borrowing autonomy to subnational units is a defining leitmotif of federalism with each State possessing the right and responsibility of sourcing finance for developmental purpose despite receiving allocation from the central government .This assertion is a truism in the Nigerian context following increased responsibilities to subnational government enshrined in Nigeria's 1999 Constitution reflecting changing paradigm in fiscal relation in intergovernmental finance (Imandojemu, 2017). Nigeria is structured with three tiers of government (federal, state, and local), with 36 states and 774 local governments. States control 50 percent of government resources and have primary responsibility for education and certain aspects of the health system. State governance capacity, however, varies widely (World Bank/DFID 2005). Taken together-the growing decentralization of developmental efforts, divergence between states' increased responsibilities and available resources makes sub national borrowing inevitable, since it provides ample opportunity to ameliorate development financing problematique on the spot rather than waiting for central government allocation.

Critical investment in local, sub national and regional infrastructure and encouraging industrial value chains integration are some of the targets of SDG 9. We often point to the deplorable state of most roads; archaic rail lines and limited coverage; the intractable bottlenecks of power supply; and poor physical conditions of our educational and medical institutions as evidences of the low level of infrastructure supply in Nigeria (Roberts, 2016). Subnational borrowings for delivering sound infrastructural investment on the basis of local needs and the achievement of SDG targets is capable of engendering equity in the distributional mechanism of growth process, achieving sustainable development and reducing the sprout of poverty.

However, there is the somber contrast between sub national debt and economic development in Nigeria. Since the 1980s, subnational borrowings in Nigeria as a whole increased fivefold. Total debt profile of the states in 2015 and 2016 was N3.03tn and N3.89tn respectively. Average growth rate of states' debt

between 2012 and 2016 remains elevated at 22.16%, while average growth rate of internally generated revenue is 9.04%. Clearly, the sustainable part for states is to rein in debt uptake and focus more on improving internally generated revenue (Budgit, 2017). Despite receiving about half the national revenue – a sum of N2.7 trillion in 2014 (US$13.5 billion at current official exchange rate) – state governments fail to provide the services that could materially improve the lives of tens of millions of Nigerians (Adams, 2016). Most states generate minimal revenue outside their monthly allocation of Nigeria's anaemic oil income. They depend almost exclusively on monthly allocations of federal revenues, which have declined sharply in line with global crude oil price (Page, 2016). The current accretion in oil revenue dampened allocation from the central government. At present, however, the ability of the States to provide essential services to their citizenry is at risk and several are in a challenging financial position. Since 2011, total State government revenues have declined by 8 per cent a year, while expenditures have increased by 4 per cent a year. At the end of 2015, State expenditures exceeded revenues by approximately N1 trillion (Ministry of Budget & National planning, 2017). Nigeria's States are facing a significantly dire fiscal cycle; most are struggling to meet core obligations, including the payment of civil servant salaries and/or pensions, the servicing of overhanging debt and seeing to the day-to-day running of government, with concomitant negative impact on individual well-being and general economic activity. The first clear indicator that Nigeria's States were teetering into financial ruin came when at least two-thirds of all 36 governors demanded a federal government relief package, due to their inability to pay salaries and benefits to civil servants for months, and in some cases, over a year. State governments therefore currently have very limited space to maneuver, as most are neck-deep in debt which was accumulated under the baseless assumption that crude oil prices would remain above the $80/barrel mark (BudgiT, 2017).

The backward state of economic development despite mounting subnational debts raises serious oxymora for policy analyst and experts in debt management. Quite surprisingly, country specific examination of the permissible subnational debt threshold remains in its infancy. Available literature reviews are usually on the empirical validation of the nexus between sub national debt and economic development. To the best of the researcher's knowledge none has examined the permissible threshold of subnational debt to economic growth level which is a sin-qua-non for effective debt management. This identified gap in the dearth of available literature review is a motivating factor for conducting this research. Against this framework, the objective of the research work is to examine the permissible subnational debt threshold and economic development in Nigeria. The remaining sections of the paper are as follows: section two presents a brief review of empirical literature; stylized facts on subnational debt is presented in three; the details of data and methodology used in this paper are presented in section four; the analysis of empirical findings are discussed in section five; and section six concludes with some policy recommendations.

METHOD

In order to empirically investigate the impact of excise tax on economic growth in Nigeria, the researcher adopted the model of Martinez- Vazquez and Vulovic (2016) with slight modification. The functional form of Martinez- Vazquez and Vulovic (2016) model is:

$$RGDP = f(SDEBT, LDEBT) \quad (12)$$

Hence, the operational estimated form of the model is as shown in equation 13.

$$RGDP_t = \beta_0 + \beta_1 SDEBT_t + \beta_2 LDEBT_t + \mu_t \quad (13)$$

The author modified Martinez- Vazquez and Vulovic model by adding exchange (EXC) and interest rate (INTR). Thus Equation (13) with the additional variables give Equation (14).

$$RGDP_t = \beta_0 + \beta_1 SDEBT_t + \beta_2 LDEBT_t + \beta_3 EXC_t + \beta_4 INTR +_t \mu_t \quad (14)$$

The author converted all variables in monetary values to logarithm and this produces Equation 15.

$$GDPGR_t = \beta_0 + \beta_1 \log SDEBT_t + \beta_2 \log LDEBT_t + \beta_3 EXC_t + \beta_4 \log INTR_t + \mu_t \quad (15)$$

$$\beta_0 > 0, \beta_1 > \text{or } < 0, \beta_2 > \text{or} < 0, \beta_3 < \text{O and } \beta_4 < 0$$

Where GDPGR = GDP growth rate, SDEBT = State debt, LDEBT = Local debt, EXC= exchange rate, INTR = interest rate and $\beta_0 - \beta_4$ = parameters to be estimated. $\beta_1, and \beta_2$ are considered either positive or negative because theoretically an increase in debt(borrowing) by the state and local authorities could increase deficit and crowd out future investment by the limited government revenue required to service debt. However, State and local government debt when used judiciously for investment in developmental project can revamp the economy. Subsequently, an increase debt by the current government will decrease future investment by successive government for led to economic growth decline. $\beta_3 and \beta_4$ are both negative because higher exchange and interest rates discourages foreign trade and domestic investment component in the aggregate national income respectively.

In this study, the author employed Augmented Dickey Fuller (ADF) test. This test operates under the hypothesis of series has unit root and Akaike criterion is used to decide optimal lag length. The ADF test has the following model:

$$\Delta X_t = \lambda_0 + \lambda_1 X_{t-1} + \lambda_2 T + \sum_{i=1}^{n} \varphi i \Delta X_{t-1} + \epsilon_t, \epsilon_t \square \text{IID}(0, \sigma^2) \quad (16)$$

In equation 16, Δ is the difference operator, X is the natural logarithm of the series, T is a trend variable, λ and φ are the parameters to be estimated and ϵ is the error term, which is independently and identically distributed with zero mean and constant variance. The stationarity test provides a ground to determine the order of integration of the variables employed in the model. One point to note is that if the variables are integrated of different orders, then there is need to look for co-integration. The author employed Johansen's approach to measure this long- run equilibrium relationship among the variables. It is made up of estimating a vector autoregressive (VAR) models, which includes difference as well as the levels of the non- stationary variables. The model for estimating cointegration is specified as follows:

$$\Delta Z_t = \varphi_0 + \pi Z_{t-p} + \sum_{i=1}^{p-1} \varphi i \Delta Z_{t-1} + \epsilon_t, \epsilon_t \text{IID}(0, \sigma^2) \quad (17)$$

In equation 17, ΔZ_t and ΔZ_{t-1} are vectors and are of I(1) variables, $\varphi i$and **π** are the matrices of parameters estimated using OLS, and ϵ_t is the Gaussian random variable. The rank, **π** determines the long- run equilibrium relationship amongst the variables and is sometimes represented by **r**. The component πZ_{t-p} produces different linear combinations of the levels of the time series, Z_t. The model shows

that if the rank of the coefficient matrix π is 1, or greater than 1, there exist one or more cointegrating vectors; hence, there is long- run relationship among the series of the model.

Equation 13 is transformed into ECM equation; it is therefore specified as follows:

$$\Delta GRGDP = \alpha_0 + \sum_{j=0}^{n} \beta_1 \Delta lnSDEBT_t + \sum_{j=0}^{n} \beta_2 \Delta lnLDEBT_t + \sum_{j=0}^{n} \alpha_3 \Delta EXC_t + \sum_{j=0}^{n} \alpha_4 \Delta lnINTR_t + ECM_{t-1} + \mu_t \quad (18)$$

The hypothesis of non- causality can be test at levels form of the variables using equation 19 and 22. Thus, we used the pair wise Granger Causality test which is stated as follows given two variables.

Granger Causality Equation of Gross Domestic Product on Growth Rate (GRGDP) and State debt (lnSDEBT)

$$GRGDP_t = \sum_{i=1}^{n} \alpha_i GRGDP_{t-1} + \sum_{j=1}^{n} \beta_j lnSDEBT_{t-1} + \mu_t \quad (19a)$$

$$lnSDEBT_t = \sum_{i=1}^{n} \alpha_i lnSDEBT_{t-1} + \sum_{j=1}^{n} \beta_j GRGDP_{t-1} + \mu_t \quad (19b)$$

Granger Causality Equation of Gross Domestic Product on Growth rate (GDPGR) and Local debt (lnLDEBT)

$$GRGDP_t = \sum_{i=1}^{n} \alpha_i GRGDP_{t-1} + \sum_{j=1}^{n} \beta_j lnLDEBT_{t-1} + \mu_t \quad (20a)$$

$$lnLDEBT_t = \sum_{i=1}^{n} \alpha_i lnLDEBT_{t-1} + \sum_{j=1}^{n} \beta_j GRGDP_{t-1} + \mu_t \quad (20b)$$

Granger Causality Equation of Gross Domestic Product on Growth rate (GDPGR) and Interest Rate (lnINTR)

$$GRGDP_t = \sum_{i=1}^{n} \alpha_i GRGDP_{t-1} + \sum_{j=1}^{n} \beta_j lnINTR_{t-1} + \mu_t \quad (21a)$$

$$lnINTR_t = \sum_{i=1}^{n} \alpha_i lnINTR_{t-1} + \sum_{j=1}^{n} \beta_j GRGDP_{t-1} + \mu_t \quad (21b)$$

Granger Causality Equation of Gross Domestic Product on Growth Rate (GDPGR) and Exchange Rate (EXC)

$$GRGDP_t = \sum_{i=1}^{n} \alpha_i GRGDP_{t-1} + \sum_{j=1}^{n} \beta_j EXC_{t-1} + \mu_t \quad (22a)$$

$$EXC_t = \sum_{i=1}^{n} \alpha_i EXC_{t-1} + \sum_{j=1}^{n} \beta_j GRGDP_{t-1} + \mu_t \quad (22b)$$

Where the non- causality is determined by the significance of α and β

RESULTS AND DISCUSSION

This chapter examines, presents and analyses the data. We began by presenting the descriptive statistics of the data used. We later carried out the pre-diagnostic test:- unit root test and co integration test. We concluded by estimating both short-run relationship with the Fully Modified Ordinary Least Squares Techniques.

Descriptive Statistics

We considered important statistics of each series in Table 1 and provided explanations on the statistics.

Table 1: Descriptive Statistics

STATISTICS	GDPGR	lnSDEBT	EXC	LnINTR	lnLDEBT
Mean	5.6801	7.2100	117.2150	4.8570	4.3712
Median	4.8873	7.8693	129.0000	6.9153	4.5663
Maximum	33.7358	8.9162	253.0925	8.6695	6.1601
Minimum	-1.6000	3.7674	21.8860	-7.7101	1.6146
Std. Dev.	6.7490	1.4976	60.2009	5.4511	1.4327
Skewness	3.2147	-0.7939	-0.2284	-1.5449	-0.4577
Kurtosis	14.3315	2.4639	2.8930	3.7355	1.9669
Jarque-Bera	162.6691	2.6919	0.2109	9.6680	1.8260
Probability	0.0000	0.2602	0.899880	0.0079	0.4013
Obs	23	23	23	23	23

Source: Author's Computation

The mean shows the measure of central tendency and it can reveal the presence of outliers in data. In Table 1, all the values of the mean are to the left of the median except GDPGR. This may indicate the presence of outliers in those series. The values obtained for standard deviations showed that there is no evidence of extreme values in the series except for exchange rate. All the values are small in size (See Table 1). The Skewness has negative values except GDPGR. They are leftly skewed. It is only GDPGR and Interest rate (NINTR) that have value higher than 3 for Kurtosis. There is evidence of normal distribution in these series. Other series are less than 3. The GDPGR and INT are not normally distributed in terms of values obtained from Jarque Bera Statistics. Their p- values are less than the 0.05 level of significance. Other series are greater than 5% level of significance. Since the skewness value of GDPGR is greater than zero, it can be concluded that the GDPGR is normally distributed also. Since all these series are normally distributed, there is evidence for reliability in the estimation to be carried out and therefore the result can be trusted.

UNIT ROOT TEST

Prior to testing for cointegration, a unit root rest must be carried out to determine the stationarity of the series. The presence of a unit root in a series implies that if there were any disturbance in the trend of such series, it will not be able to recover back to its original M trend pattern. The null hypothesis for the test is that the series has unit root. This study makes use of ADF Unit Root test because it is among the common test for unit root.

Table 2: Test of Unit Root with ADF

Variables	Level/Difference	Critical Value (ADF)	ADF	ORDER
GDPGR	Level	-3.0048	-3.7789	1(0)
lnSDEBT	Level	-3.0207	-1.1791	
	First Diff.	-3.0123	-7.3332	1(1)
lnLDEBT	Level	-3.0048	--3.0811	1(0)

lnINTR	Level	-3.0048	-2.6780	
	First Diff.	-3.0123	-7.8442	1(1)
EXC*	Level	-1.9572	2.2036	1(0)
	First Diff.	-1.9581	-2.0190	

Source: Author's Computation

Table 2 shows the results of the unit root test estimation on the series using Augmented Dickey-Fuller. All the series are stationary at first difference 5% significant level except lnLDEBT. Log of LDEBT (lnLDEBT) is stationary at level (See Appendix Three).

Cointegration Test

The researcher proceeds to cointegration test after confirming the stationarity of each series. The result was given in Table 3. Johansen Cointegration technique is employed to check for the existence of the long run relationship among the series.

Table 3: Trace Test Results of Cointegration Test

Null Hypothesis	Alternative Hypothesis	Statistics	Critical Values	P- Values
Model I; SERIES: *GDPGR, lnSDEBT, lnLDEBT, lnINTR, EXC*				
r = 0	r ≥ 1	115.9998	69.81889	0.0000
r ≤1	r ≥ 2	72.19208	47.85613	0.0001
r ≤2	r ≥ 3	37.97949	29.79707	0.0046
r ≤3	r ≥ 4	18.06931	15.49471	0.0200
r ≤4	r ≥ 5	6.294447	3.841466	0.0121

Source: Author's Computation

Table 3 shows that there are five co-integrating equations for Trace test. This result shows that the series in each of the models are co-integrated and therefore they have an error correction representation.

ERROR CORRECTION MECHANISM

Table 4: Error Correction Mechanism

Dependent Variable: D(GDPGR)
Method: Fully Modified Least Squares (FMOLS)
Date: 12/17/17 Time: 07:01

Variable	Coefficient	t-Statistic	Prob.
D(LNSDEBT)	3.4826	2.4930	0.0258
D(LNINTR)	0.1671	0.9891	0.3394
D(LNLDEBT)	-0.9640	-1.0861	0.2958
D(EXC)	-0.0250	-0.5132	0.6158
ECM(-1)	-1.0728	-6.4864	0.0000
C	4.7660	1.0954	0.2918
R-squared	0.6229		
Adjusted R-squared	0.4882		
S.E. of regression	6.5821		
Long-run variance	19.0468		

The coefficient of ECM is –1.0729 with a prob value of 0.0000. The ECM coefficient has the correct negative sign and it indicates a speed of adjustment of 107.29% which is statistically significant at the 0.05 level. This means that any disequilibrium in the system can be restored at a speed of adjustment of 107.29% which is considered to be very fast.

The result of the Error Correction Model indicates that the selected explanatory variables jointly have a significant relationship with Growth Rate of Gross Domestic Product in the short-run. The Coefficient of determination (R^2) shows that the explanatory variables explained 62.79% of the total variation in Gross Domestic Product Growth Rate. The Fully Modified OLS do not report F-statistic and the Durbin Watson statistic

The estimate of the constant is 4.7660 implying that if all the independent variables are zero, Gross Domestic Product Growth Rate will approximately be 4.77%. The short run coefficient for the State government debt (SDEBT) is 3.4827. This implies that both SDEBT has a direct relationship the Growth rate of Gross Domestic Product (GDPGR). This relationship is statistically significant at the 0.05 level, as the pro value has shown. The Local government debt (LDEBT) on the other hand, is -0.9640%. The sign of the coefficient implies that LDEBT has an indirect relationship the Growth rate of Gross Domestic Product (GDPGR) in the short run. The relationship is not statistically significant at the 0.05 level, as the pro value has shown.

Exchange rate (EXC) has a coefficient of -0.0250 indicating an indirect relationship between Exchange rate and GDPGR in the short run. This conforms to a'priori expectation and not statistically significant as indicated by the prob value of 0.6158%. Interest Rate also has a direct relationship with the GDPGR with a coefficient of 0.1671%. This relationship does not agrees with a'priori expectation and not significant as indicated by the prob value.

The researcher proceeds to over- parameterisation ECM. The result is reported in Appendix Five. The result showed that none of the variables and their lags is significant. The researcher therefore carried out parsimonious ECM and the result is reported as Table 5.

Table 5: Parsimonious ECM
Dependent Variable: D(GDPGR)
Method: Fully Modified Least Squares (FMOLS)
Date: 12/17/17 Time: 07:08

Variable	Coefficient	t-Statistic	Prob.
D(LNSDEBT)	4.0415	2.6272	0.0177
ECM(-1)	-1.0135	-5.4495	0.0000
C	0.1718	0.1494	0.8830
R-squared	0.5935		
Adjusted R-squared	0.5457		
S.E. of regression	6.2016		
Long-run variance	25.8592		

Source: Author's Computation

The coefficient of ECM is -1.035 with a prob value of 0.0000. The ECM coefficient has the correct negative sign and it indicates a speed of adjustment of 103.5% which is statistically significant at the 0.05 level. This means that any disequilibrium in the system can be restored at a speed of adjustment of 103.5% which is considered to be very fast. The parsimonious ECM estimates shows that State government debt (SDEBT) able to explain 59.35% of the total variation in the Growth Rate of Gross Domestic Product.

The result shows that in the parsimonious ECM, State government debt (SDEBT) has a positive relationship with the Growth Rate of Gross Domestic Product D(GDPGR), with a coefficient of 4.041. This relationship does not conform to a'priori expectation though it was also found to be statistically significant at the 0.05 level of significance. This finding shows that State government debt promotes economic growth in the short run. A 1% change in State government debt leads to 4.04% increase in GDP growth rate.

GRANGER CAUSALITY TEST

In order to investigate the causal relationship among the variables, Granger causality test was employed to ascertain the direction of causality between State government debt and Gross Domestic Product in Nigeria.

Table 6: Granger Causality Test for State government debt (lnSDEBT) and GDPGR
Date: 12/17/17 Time: 21:49

Null Hypothesis:	Obs	F-Statistic	Prob.
LNSDEBT does not Granger Cause GDPGR	21	1.3041	0.2988
GDPGR does not Granger Cause LNSDEBT		0.2123	0.8109

Source: Author's Computation

From table 6, the null hypothesis that State government debt (lnSDEBT) does not granger cause GDPGR has an F-statistic of 1.3041 and a pro value of 0.2988. Since the pro value is greater than 0.05, it indicates that the F-statistics is not statistically significant hence, the null hypothesis that lnSDEBT does not granger cause GDPGR is accepted.

Secondly, the null hypothesis that GDPGR does not granger cause lnSDEBT has a F-statistic of 0.2123 with a pro value of 0.8109. Since the pro value is greater than 0.05, it indicates that the F-statistic is not statistically significant. Hence, the null hypothesis can be accepted which implies that GDPGR does not granger cause lnSDEBT. Hence, there is no causality between GDPGR and lnSDEBT.

Table 7: Granger Causality Test for Local government debt (LDEBT) and GDPGR
Sample: 1994 2016

Null Hypothesis:	Obs	F-Statistic	Prob.
LNLDEBT does not Granger Cause GDPGR	21	0.0086	0.9914
GDPGR does not Granger Cause LNLDEBT		1.6248	0.2278

Source: Author's Computation

The result in Table 7 showed that lnLDEBT does not granger cause GDPGR in Nigeria. The pro- value (0.9914) is greater than the 0.05 level of significance. While the GDPGR does not granger cause LDEBT. The pro- value (0.2278) is greater than the 0.05 level of significance. The researcher therefore concludes that there is no causality between lnLDEBT and GDPGR.

Table 8: Granger Causality Test for Interest Rate (INTR) and GDPGR
Sample: 1994 2016

Null Hypothesis:	Obs	F-Statistic	Prob.
LNINT does not Granger Cause GDPGR	21	0.65525	0.5327
GDPGR does not Granger Cause LNINT		0.31050	0.7374

Source: Author's Computation

The result above showed that there is no causality between lnINTR and the GDPGR. The pro- value is 0.0202 and is less than the 0.05 level of significance. We can therefore say that lnINTR granger causes GDPGR. On the other hand, the result further showed that the GDPGR does not granger cause lnINT Rin Nigeria. The pro-value is 0.7923 and is greater than the 0.05 level of significance. There is therefore no causality between GDPGR and lnINTR.

Table 9: Granger Causality Test for Exchange Rate (EXC) and GDPGR
Pairwise Granger Causality Tests
Sample: 1994 2016
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
EXC does not Granger Cause GDPGR	21	0.1463	0.8651
GDPGR does not Granger Cause EXC		0.3635	0.7008

Source: Author's Computation

From table 9, the null hypothesis that Exchange Rate (EXC) does not granger cause GDPGR has an F-statistic of 0.1463 and a pro value of 0.8651. Since the pro value is greater than 0.05, it indicates that the F-statistics and not statistically significant hence, the null hypothesis that EXC does not granger cause GDPGR is accepted.
Secondly, the null hypothesis that GDPGR does not granger cause EXC has a F-statistic of 0.3635 with a pro value of 0.7008. Since the pro value is greater than 0.05, it indicates that the F-statistic is not statistically significant. Hence, the null hypothesis can be accepted which implies that GDPGR does not granger cause EXC. Hence, there is no causality between GDPGR and EXC.

CONCLUSION

The study has the objective of investigating the impact of sub- national debts on economic development in Nigeria. The findings of the study have shown that economic development is promoted through debts received from the state government and local government both in the short run and long run periods The study therefore concludes that there is need for the Federal Government to

moderate the debts received by both the state government and local government and not to put embargo on their applications for loans.

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