Diagnostics Analysis of External Debt Burden and Economic Growth in Nigeria

Chris AC-Ogbonna
Department of Economics,
Veritas University, Abuja (The Catholic University of Nigeria)

A b s t r a c t

Debt burden in Nigeria has been a chronic virus jeopardising the future of Nigerians. Therefore, the study carried out a Diagnostics analysis of external debt burden on the economic growth in Nigeria from 1981 to 2016. Since Nigeria gained independence, the degree of borrowing from foreign creditors have become so alarming and there is nothing really tangible on ground to justify the effective and efficient allocation of such borrowed funds in diversifying the productive base of the Nigeria economy. The objective of the study is to investigate the relationship that exists between external debt and economic growth in Nigeria with secondary data sourced from CBN and DMO statistical/annual bulletins respectively. The Ordinary Least Square (OLS) Method is employed in the estimation of the multivariate regression model. In the data analysis, External Debt (EXDT), Inflation (INF) and Exchange Rate (EXHR) are used as independent variables against the dependent variable of Real Gross Domestic Product (RGDP). The result shows that there is some level of relationship between EXCHR, EXDEBT and RGDP whereas a negative relationship exists between INFL and RGDP. This means that any change in RGDP will cause an increase in EXCHR and EXDEBT by 159049.2 and 409.9191 respectively. The R2 of 0.90 approximately shows that 90% of the changes in RGDP were as a result of the performance of the explanatory variables employed, while the remaining 10% will be as a result of other variables not included in the model. This shows a very strong determination of the model. In summary, the result shows that external debt burden stagnates economic growth in Nigeria as justified by the various variables used in this study. In a nutshell, there is a negative relationship between external debt burden and economic growth in Nigeria and conforms to the apriori expectation. The F(Prob) value of 0.0000 shows that the explanatory variables employed in this study are statistically significant in explaining the performance of RGDP. The study further recommended that in line with the Public Debt theory, Government should ensure periodic debt servicing and repayments as at when due to avoid unnecessary debt rescheduling and debt overhang as this adversely affect economic growth in Nigeria. This will ensure economic growth in Nigeria.

Keywords: *Diagnostics, Analysis, External Debt, Economic Growth*

Corresponding Author: Chris AC-Ogbonna

Background to the Study

External debt in Nigeria can be traced back to 1958 when the Nigeria government borrowed US$28 million for railway constructions. This was followed by a loan of 12 million pounds for revamping the country in 1960. Like most developing countries of the world, Nigeria relies substantially on external funds for financing its development projects – iron and steel mills, roads, electricity generation plants etc. Such external funding usually takes the form of external loans. In the early years of political independence (1960 through 1975), the size of such loans was small, the rate of interest concessionary, the maturity was long-term, and the source was usually bilateral or multilateral in nature. In the first year of Nigeria's political independence, Nigeria was not known in the international community as a debtor nation. At least within the period, she was not a significant borrower of foreign funds. And with her great fortunes of oil wealth in the early seventies, that made it necessary for her to borrow to finance production in the economy.

However, this glorious moment and period is now part of history, as Nigeria has become a member of the big league of debtor nations. This has been the situation since she took her first major jumbo loan of one billion naira in 1978 under General Obasanjo's Regime and other subsequent loans, which could not yield expected benefits. Though external loans were taken to maintain the tempo of economic growth and development already gingered by the oil boom from 1971 – 1977. The need for the first loan arose from the depletion of our foreign resources and shortage of foreign exchange required for capital goods imports. The foreign exchange shortage was due to the drastic fall in the price and demand for oil in the world market since oil is the country's major foreign exchange earner; there was, therefore, a decrease in income for the Government. It was then reasoned that the borrowed funds when invested would build greater incomes for the government, and the benefits would help to offset the loans and its interest payment. Thereafter, more external borrowing was undertaken as credit from bilateral and multilateral sources came on board. Sooner than expected, Nigeria began to face debt crises, which lingered till date.

The most severely indebted countries of the developing world are trapped on a debt treadmill as they are forced to take new loans to pay old ones or risk default and potential economic collapse. Sub-Saharan African countries, for example, paid more in debt between 1990 and 1993 than they spent on Human Capital Development. Still, they watched their debt load double. As the Nigerian government reels under financial pressure to generate foreign currency to pay the rising debt, poverty and environmental devastation increased. This situation is becoming increasingly unsustainable, economically, socially, and environmentally. Although the debt overhang models do not analyse the effects of debt on growth explicitly, the implication still remains that large debt stocks deplete growth by partly reducing investment with a resultant negative effect on poverty.

In this research, however, we shall look at the level of relationship between external debt burden and economic growth in Nigeria.

Statement of the Problem

The major economic problem in Nigeria today is that the expected higher returns from the borrowed funds are not achieved. Rather than reap benefits, Nigeria has continued to accumulate greater amounts of debts with high-interest payments. The increasing debt and service payment situation has reached a crisis point such that it has now become a major problem to the Government and the country in general. The debt burden issue has in no doubt put pressure on economic reforms, economic growth and development in Nigeria. It has affected the function of public service delivery, private sector performance and industrial development. The external debt burden escalated from N8, 819.4 million in 1982 to N100, 577.7 million in 1983 and to N100, 787.6 in 1987.

DMO (2013) put the nation's external debt at $6.67 billion, (about N1.035 trillion). Nigeria spent $8.0429 billion to service debt in 2006 and $10. 1072 billion in 2005 before the debt relief of 2006. The Federal Government declared that it was worried by the domestic debt Stock and was working towards cutting it down from the current N5.96 trillion to about N500 Billion by 2015.

The external debt is typically owed to foreign creditors such as multilateral agencies like the Africa Development Bank, World Bank, the Islamic Development Bank, as well as other bilateral source including the China Exim Bank, the French Development Bank or the Japanese Aid Agency, or to private creditors such as investors in our Eurobonds."Many of the multilateral loans are at zero interests, 40 years maturity, and 10 years grace. Others are at less than three per cent rate of interest. The nation's total debt stock at $44 billion; giving the breakdown as $5.9 billion external and N5.6 trillion domestic.

"This underscores the necessity to control the rising domestic debt profile which has been a source of concern. We have provisioned N559.6 billion for domestic and foreign debt service. At present, our external debt stands at $5.9 trillion, while our domestic debt is N5.96 trillion. In naira terms, both domestic and external debt stands at N6.8 trillion or in dollar terms, $44 billion.

The past two decades were characterized by increasing concern about the foreign debt crisis of Nigeria. The country has acquired substantial amounts of external debt during the period in question. This poses a serious problem to the nation's development. The country's debt servicing burden reached critical proportions as reflected in the high record number of debt rescheduling, the sharp rise in external payment arrears and continuous recourse to more credit facilities. For instance, external debt during the early 1980s increased Nigeria's official debt from US$4.1 billion at end of 1980 to US$24.6 billion by the end of 1986. This was due to the nosedive in the world oil price which brought government expenditure above government earnings. The government had to borrow to finance its industrial projects.

In 1999, Nigeria had an outstanding foreign debt of US$28.4 billion, debt service payments amounted to US$1.72 billion and payment arrears of US$19 billion. Foreign

debt stock stood at US$32.92 billion at the end of December, 2003 while external debt service payment was about US$2.0 billion during the same year. Also in the year 2000, Nigeria external debt profile was approximately $300 billion, even though she has paid 200% on debt servicing alone over the principal sum borrowed. The debt crisis in Nigeria has constituted some hindrances to Economic Growth especially from 1980 to date. As a debt-ridden country, Nigeria's economic growth is threatened as some macro-economic variables such as unemployment, balance of payment, inflation, poverty; terms of trade etc are adversely affected.

In 2004, Nigeria's foreign debt profile received unparalleled attention. In that year, former President Olusegun Obasanjo announced the write-off of about US$18.0bn from the $30.0bn owed our foreign creditors, particularly the Paris Club. This came as a source of relief to the government and the people as the erratic and uneven debt demands and repayments can undermine the long-term development strategy of the nation. By 2004, it dropped to $1.757 billion. The external debt stock figure significantly went down to $3.5 billion and $3.4 billion in 2006 and 2007, respectively as indicated. The debt figure, however, has been on a steady increase since then; $3.7 billion in 2008, $3.9 billion in 2009, $4.5 billion in 2010, $5.7 billion in 2011, $6.5 billion in 2012 and $9.0 billion in 2013.

Large debt service payment imposes a number of constraints on a country's growth prospect. It drains a country's limited resources and curtails financial resources for domestic developmental needs. Large debt servicing obligations and debt burdens can depress investment, and hence economic growth through its illiquidity and disincentive effects. The illiquidity effect results from the fact that there are only limited resources to be divided among consumption, investment, and external transfers to service existing debt. The disincentive arises because expectations of future tax burdens tend to discourage current private investment. This is so because new investors are reluctant to resume activity for the fear that they will soon share in defaults with creditors on old debt. Furthermore, the debt overhang provides a link between capital flight and external debt; "this is based on the fear that the tax liability of domestic investors will rise in the future, thereby creating capital outflow, instead of saving domestically". These borrowings cheapen the economy and kept the country in a vulnerable state in the hands of the creditor countries.

Today, it is believed that Nigeria's external debt has affected some macroeconomic growth variables such as GDP, Employment, Inflation, Balance of payment, Exchange rate, interest rate, etc. which therefore raises the question, in view of the perceived structural imbalance created by these huge debt profiles on key variables of the Nigeria economy, can a debtor country continue to service its debt and at the same time, achieve sustainable growth and this is the actual problem that instigated this investigation.

Objectives of the Study
The main objective of the study is to evaluate the relationship between external debts burden and economic growth in Nigeria from 1981 – 2016.

Literature Review and Theoretical Framework

Oke and Sulaiman, (2012) examined the impact of external debt on the level of economic growth and the volume of investment in Nigeria between 1980 and 2008. The study adopted the Debt Cum-Growth model along with the Investment model while the econometrics analysis techniques of multiple regressions were employed. The result of the analysis indicates that there exists a positive relationship between external debt, economic growth and Investment which was confirmed by coefficient of determination (R2) of about 79.8%. The findings reveal that the current external debt ratio of GDP stimulates growth in the short term, while the Private Investment which is measure of real and tangible development shows a decline. The study recommends among others that government should ensure that appropriate measures are put in place to achieve optimal use of borrowed funds so that servicing such funds will not invoke economic crises and erode the level of private investment which is central to the overall economic growth and development.

James, (2014) reviewed the interaction between external debt and economic growth, and analyses the sustainability of Nigeria's foreign debt. The study employed analytical method and the findings from the work showed that debt relief would have a positive impact on investment and growth. Furthermore, the work recommends that government needs to step up its growth performance and use concessional debt with the lower interest rate in order to keep the debt at a sustainable level. Victor, Fefa and Mile, (2006), examined the relationship between external debt and economic growth in Nigeria for the period of 1981-2014. The study made use of both descriptive and econometric tools. The analysis of unit root was performed on each of the variables incorporated in the model and the result showed that. The regression results showed that a significant relationship exists between external debt and economic growth in Nigeria and that external debt stock impacted positively while external debt service impacted negatively on the annual growth rate of the Nigerian economy both in the long run and the short run. The study recommended that debt the stock borrowed should be effectively managed. The federal government should lay down guidelines in terms of defining the purpose, duration, moratorium requirements and commitments, negotiation among others including conditions for external debt loans. This may guide against high external debt stock that would lead to exceeding healthy threshold.

Macro, Luca and Andrea, (2000) examined the theory and empirical evidence of external debt sustainability. The debt overhang model was used. The result showed that debt sustainability is a determinant for poverty alleviation and economic growth. The study recommended debt thresholds to ease temporary liquidity constraint of servicing public debt. Ajayi and Oke, (2012) worked on the impact of debt on investment and growth. It adopted regression analysis of OLS on secondary data sourced from CBN, Economical and Financial review, Business times, Financial Standard and relevant publication from Nigeria on variable like National Income, Debt Service Payment, External Reserves, Interest rate among others. The finding of the study indicates that external debt burden had an adverse effect on the national income and per capita income of the nation. The

study recommended that debt service obligation should not be allowed to rise than foreign exchange earnings and that the loan contracted should be invested in the profitable venture, which will generate a reasonable amount of money for debt repayment.

Ajayi, (2017) examined the effect of the external debt burden on economic growth and development of Nigeria.It adopted regression analysis of OLS on secondary data sourced from CBN, Economical and Financial review, Business times, Financial Standard and relevant publication from Nigeria on variable like National Income, Debt Service Payment, External Reserves, Interest rate among others. The finding indicates that external debt burden had an adverse effect on the national income and per capita income of the nation. Obadan (2000).Nigeria External debt stock in the democratic period 1999 – 2006 remained at about the same level as it was in 1988–US$ 28.77 billion. In spite of the lifting of the embargo on foreign loans, no new loans were contracted. However, some categories of debt were not serviced, particularly those owed to the Paris Club Creditor Country as well as arrears on post cut off date debt. In spite of the resources constraints, the sum of US$1.5 billion was set apart to service external debt in the year 2000 while arrangement continues on debt reduction negotiation with creditors. The Government resumed concessionary borrowing multilateral and bilateral sources, especially from the word Bank. Borrowed funds were strictly to be used for projects with satisfactory social and infrastructural projects and export–increase/import–decreasing features for economic projects. The author reviewed the democratic era under Obasanjo when the debt relief was granted to Nigeria by the Paris club of creditors under the nagle terms, as a step towards saving the country from the serious heat of the global economic crisis, but despite the applause received by this initiative the country went ahead to access further borrowing without serious service delivery to the country because the country is yet to have stable power supply. The author also did not mention domestic overhang despite a series of domestic borrowing aimed at cushioning the effect of poverty.

Obadan (2004).The debt overhang of US$ 31.0 billion in 2004 constituted a serious headache to private investment and generally to growth and development. The government in its budget proposed to service her external debt in a satisfactory manner without compromising the requirements for domestic growth. This is because of a group of creditors whose debt must be serviced as at when due, otherwise the serious consequences may result in the country. Also in the plight of sourcing for substantial debt cancellation, it will help improve the image of the country with its creditors. This is the strong need for Nigeria to seek substantial relief from the heavy debt burden through initiatives that have features of debt reduction. Serious implementation of the NEEDS reform programme may be helpful in this regard.The author agreed that the huge external debt overhang on the economy is a big obstacle to the wheel of economic development in Nigeria.

Adepoju (2007) Every year Nigeria has to pay a large sum of money on interest payments and principal on its stock of debt. Nigeria has been paying approximately $1 billion

annually to Paris club creditors and a further $0.8 billion to its other multilateral and commercial creditors. However, Nigeria has not been able to pay the US $3 billion debt service due every year. As a result, arrears have been built upon Nigerian's Paris club debt. The accumulation of arrears and associated penalty charges has created the paradox whereby Nigeria's total debt stock has been increasing year after year even though it has been repaying debts, and has not borrowed any more money from Parish club creditors. With the elimination of 100% of its Paris club debt, Nigeria's annual debt service due should fall from US$3 billion to some US$0.8 billion and the amount paid will fall from US$1.8 billion to US$ 0.8 billion, more than half of the payment to the debtors. This means that $1 billion can be diverted to spending on poverty reduction. In addition, Nigeria will escape from the debt spiral caused by rising penalties and interest on its unpaid debts – a spiral that each year adds about $1 billion to its debt burden. Another dimension of Nigeria's reduced debt burden is that it should improve the country's creditworthiness in the eyes of investors, thereby improving confidence and promotion of private sector development in the country.

The deal with the Paris Club represents a great achievement for the Nigerian administration under President Obasanjo on behalf of the Nigerian people. It is an endorsement by western governments of all that is achieved in the country since the reintroduction of democracy and it means Nigeria can use more of her resources to help herself in reducing poverty and working towards the MDGs. (Millennium Development Goals). The authors saw the debt relief as a big achievement under Obasonjo administration but were silent on further borrowing initiated few years after the debt forgiveness. However, they totally frowned at external debt over-hang as it constitutes a clog on the wheel of economic development. Adepoju, (2007) worked on Management on Sustainable Economic Growth and Development. The paper reviewed the roles of debt management practices on sustainable economic growth and development with particular emphasis on Nigeria. Information was generated extensively from literature, the Nigeria Central Bank and National Bureau of Statistic reports. It adopted regression analysis of OLS on secondary data The analyses of the data collected with descriptive statistics shows that availability of access to external finance strongly influences the economic development process of any nation. His conclusion was that Best arrangement in debt payment must be put in place from time to time in response to changes in the economy and the polity. Debt can only be productive if well managed so as to make the rate of return higher than the cost of debt servicing. Foreign loans are organized international credit negotiated between two countries, on terms acceptable to them in today's world, the lender countries are usually the advanced industrialized countries of Europe, Asia and North America while the borrowing countries are the poor underdeveloped countries of the thirds world in Africa, Asia and Latin America.

According to This day Newspaper (2006), Nigeria owes Australia, Denmark and Russia US$491 million, US$524 million and US$32 million respectively. The signing of agreements will facilitate the resumption of normal bilateral economic relations between these countries and Nigeria as well as the restoration of the export credit covers by their

respective Export Credit Agencies which Nigeria needs to improve trade and investment relations. But a further review of the argument shows that since the agreement was signed in 2006, Nigeria economy is yet to be properly productive and impact positively on the welfare of Nigerians.

It was observed from the works of these various authors that the external borrowing is not the major problem of economic growth in Nigeria but no implementation framework designed to achieve the objectives of borrowing. Much study has not been done on the Diagnosis of external debt burden on the economic growth in Nigeria using these key variables (external debt, Exchange rate and inflation) and time frame from 1981-2016 which therefore created the gap of this study. The need to close this gap claims the attention of this study. The most reoccurring term in the works reviewed was that borrowing is good and a means of financing and providing effective and efficient and critical infrastructures for industrial take off in Nigeria. Therefore, something urgent needs to be done to make the country productive and free from this debt overhang. The study is anchored on the Public debt theory because it encourages borrowing to finance development projects and can be remedied through savings and investment.

Research Methodology and Model Specification
The research is designed to be totally ex-post factor research and econometric technique of investigation on foreign debt burden and economic growth in Nigeria. This is because it considers quantitative data for analysis. The research will adopt the multiple regression analysis methods of estimation technique. Nigeria's high debt burden has grave consequences for the economy and the welfare of the people. The servicing of the external debt has severely encroached on resources available for socio-economic development and poverty alleviation. Although since 1986 during the structural adjustment programme, Nigeria had taken a decision to limit debt service to no more than 30 per cent of oil receipts; this has not brought much relief. The external debt is typically owed to foreign creditors such as multilateral agencies like the Africa Development Bank, World Bank, the Islamic Development Bank, Paris club, as well as other bilateral source including the China Exim Bank, the French Development Bank or the Japanese Aid Agency, or to private creditors such as investors in our Eurobonds.

To achieve this, we shall employ the multi-regression analysis with special consideration of the neo-classical regression method. Multiple regression analysis is a powerful technique in data analysis used for predicting unknown value of a variable from the known value of two or more variables - also known as predictors. It is an advanced statistical tool and extremely powerful when one is trying to develop a "model" for predicting a wide variety of outcomes.

Model Specification
Following Oke and Sulaiman, (2012) model specification who examined the impact of external debt on the level of economic growth and the volume of investment in Nigeria between 1980 and 2008, we, therefore, adopt the same growth model to specify the model

for this study. The result of the analysis indicated that there exists a positive relationship between external debt, economic growth and Investment which was confirmed by coefficient of determination (R2) of about 79.8%. Our model follows the multi-regression analysis as widely applied in the econometric analysis.

The model is, therefore, specified as follows:

Functional Specification
RGDP = f(EXDBT, INFL,EXCHR)   --------------------- Equation 1

Econometric Specifications
RGDP= β0+ β1EXDBT+β2INFL+ +β3EXCHR + Ut   ---------------------- Equation2

Where:
   RGDP = Real Gross Domestic Product (a proxy for economic growth)
   EXDBT = External Debt (a Proxy for External Debt Burden)
   INFL = Inflation (introduced in the model as a control variable to contain the influence of fluctuations in general price level on the variables),
   EXCHR = Exchange Rate
   U= Error term
   β0 is a constant parameter
   β1,β2,β3 are parameters to be estimated

From the model, Real Gross Domestic Product (RGDP) is the dependent variable. The independent variables in the model are external debt, inflation exchange rate. These variables have the ability to affect the rate of growth in the Nigerian economy negatively or positively.

Apriori Expectation
β0> 0, β1>0, β2>or <0, β3>0

Method of Data Collection and Sources of Data
The relevant data for this study were obtained from the Central bank of Nigeria statistical bulletin, Debt Management Office, Journals, Internet, Textbooks, and previous research work. So the study adopted secondary data as information on these variables are readily available.

Estimation Techniques
To access the Diagnostic Analysis of external Debt burden in Nigeria, the study used time series data for the periods 1981 -2016. The multiple regression method and descriptive analysis were employed to establish the relationship between the variables of the study. The Coefficient of Determination (R2) was also used to determine the total variation of the dependent variables as a measure of goodness fit.

Data Presentation and Analysis of Regression Results

The result presented below is a product of the estimation of the model specified in our research methodology. The estimation procedure employed in this study is the multi-regression method of OLS estimation technique as earlier specified.

Descriptive Statistics

Table 1: Showing the Descriptive Statistics of the Variables in the study

Statistics	RGDP	INF	EXCHR	EXDEBT
Mean	31757148	20.23444	76.59194	8487.120
Std. Dev.	18151714	18.70814	72.03827	16503.51
Maximum	69023930	76.76000	253.4900	64371.36
Minimum	13779255	0.220000	0.610000	2.330000
Jarque-Bera	5.289229	17.90863	2.620898	39.30965
Jarque-Bera (Prob)				

Source: Authors Computation from E-view 2018

The above table presents the descriptive statistics for the variables. There is an exhibition of positive mean return for all the variables of the study. Also, the sum squared deviation row represents the net change over within the sample period of the study. The large values of standard Deviation show that the various variables employed in this analysis were widely spread from their corresponding mean values. In terms of skewness, all the variables (RGDP, INFL, EXCHR and EXDEBT) have return distribution that is positively skewed, which implies that they have a long right tail. Finally, the table shows that INFL and EXDEBT were normally distributed while RGDP and EXCHR were relatively normally distributed as indicated by their respective p values of Jarque-Bera statistics.

Table 2: Unit Root Test for Stationarity

	@ level		@1st Difference		@2nd Difference		Remarks
	ADF Statistic	Prob	ADF Statistic	Prob	ADF Statistic	Prob	
RGDP	-0.709418 (-2.951125)	0.8311	-1.958449 (-2.951125)	0.3029	-5.095505 (-2.954021)	0.0002	Stationary at 2nd Difference
INFL	-3.094608 (-.948404)	0.0362	-4.484379 (-2.960411)	0.0001	-7.116736 (-2.963972)	0.0000	Stationary at Level
EXCHR	1.311184 (-.948404)	0.9982	-3.668561 (-2.951125)	0.0093	-8.208820 (-2.954021)	0.0000	Stationary at 1st Difference
EXDEBT	-4.422976 (-.948404)	1.0000	-2.245945 (-2.951125)	0.1947	-8.044853 (-2.954021)	0.0000	Stationary at 2nd Difference

Source: Authors Computation from E-view 2018

Decision Rule

If ADF Statistic < 5% Criterion, Accept H1 that there is no unit root. In such a case, the variable is stationary. If ADF Statistic > 5% Criterion, Accept H0 that there is unit root. In such a case, the variable is not stationary. So, from the Unit Root Table above, INFL became stationary at Level, EXCHR became stationary at First Difference while RGDP and EXDEBT were stationary at Second Difference.

Presentation of Regression Results

The result is the estimation of the model specified in our methodology in the previous chapter. The estimation procedure follows the Ordinary Least Squares (OLS) method of estimation and the econometric software used in the e-views 3.1 version. The result is as presented and analysed below:

Table 3: Showing the Regression Result

Variable	Coefficient	t-Statistic	Prob.	R-squared	0.899019
C	16520671	7.231239	0.0000	Adjusted R-squared	0.889552
INFL	-20976.31	-0.353635	0.7259	F-statistic	94.96345
EXCHR	159049.2	7.151619	0.0000	Prob(F-statistic)	0.000000
EXDEBT	409.9191	4.458146	0.0001	Durbin-Watson stat	0.483788

Source: Author's computation from e-view regression output 2018

The Regression result above shows that there is a positive relationship between EXCHR, EXDEBT and RGDP whereas a negative relationship exists between INFL and RGDP. This means that any change in RGDP will cause an increase in EXCHR and EXDEBT by 159049.2 and 409.9191 respectively. The R^2 of 0.90 approximately shows that 90% of the changes in RGDP were as a result of the performance of the explanatory variables employed, while the remaining 10% will be as a result of other variables not included in the model. This shows a very strong determination of the model. The econometric tests show that the model conforms to the OLS assumptions. What the work suggests is that an increase in external debt burden will decrease economic growth if the funds borrowed are not properly utilized otherwise it will cause an increase in economic growth if the borrowed funds are properly utilized. Increase in inflation will crowd out private investments which will decrease economic growth. Also, an increase in the Nigerian exchange rate will increase RGDP while a decrease will, in turn, reduce economic growth.

The F (Prob) value of 0.0000 shows that the explanatory variables employed in this study are statistically significant in explaining the performance of RGDP. This is because the F(Prob) value of 0.0000 is less than the 5% level of significance, as such we accept H1 that the model is significant statistically. The DW result of 0.483788 indicates the presence of positive auto serial correlation in the analysis. The t-test result proves that only EXCHR and EXDEBT were statistically significant in explaining the performance of RGDP. This is because the t(Prob) for EXCHR and EXDEBT were less than the 5% Confidence interval, as such we accept H1 that the parameters released to EXCHR and EXDEBT were

statistically significant in explaining the performance of RGDP. However, the estimate released to INFL was not statistically significant in explaining the performance of the Dependent variable and as such, the performance of INFL was not significant statistically. Equally, the intercept was significant too.

Co-integration
Table 4: Showing Result of the Co-integration

Hypothesized No. of CE(s)	Eigenvalue		Statistics		5% Critical Value		Prob.**	
	Rank Test	Max Eigen	Rank Test	Max Eigen	Rank Test	Max Eigen	Rank Test	Max Eigen
None *	0.472303	0.472303	47.93358	21.73394	47.85613	27.58434	0.0492	0.2343
At most 1	0.381339	0.381339	26.19965	16.32675	29.79707	21.13162	0.1229	0.2063
At most 2	0.212965	0.212965	9.872896	8.142423	15.49471	14.26460	0.2906	0.3644
At most 3	0.049623	0.049623	1.730473	1.730473	3.841466	3.841466	0.1883	0.1883

Source: Authors Computation from e-view Regression Output 2018

The above table shows the co-integration result of RGDP, INFL, EXCHR and EXDEBT. At the Rank Test, "At Most 3" the Probability value of 0.049623 proves the presence of a long run relationship among the variables listed. In this, the alternative hypothesis was accepted that there is a co-integration relationship existing between the variables. Also at Max Eigen test, "At Most 3" with the Probability value of 0.049623 shows that the acceptance of the alternative hypothesis that there is a co-integration relationship existing between the variables. With this, the result explains that there is a long run relationship existing between RGDP, INFL, EXCHR and EXDEBT. Thus, the need for an Error Correction Model.

Error Correction Model
Table 5: Showing Result of the *ECM*

	D(RGDP)	D(INFL)	D(EXCHR)	D(EXDEBT)
R-squared	0.760837	0.197998	0.108889	0.560464
Adj. R-squared	0.667252	-0.115828	-0.239807	0.388472
F-statistic	8.129869	0.630916	0.312275	3.258659

Source: Authors' computation from e-view regression output 2018

Co-integration and non-spurious regression are the fundamental requirements of ECM. Results of Johansen co-integration test for INFL, EXCHR and EXDEBT with RGDP provide enough evidence on the long run relationship between the variables under consideration as there are co-integration equations. With the VECM result, EXCHR and EXDEBT have a negative co-integrating equation with RGDP while INFL has a positive co-integrating equation with RGDP. In INFL, the result shows that in every year 20 per cent (approximately) of the divergence between the short-run levels from its long-run path is eliminated. In EXCHR, at about 11% (approximately) of the divergence between

the short-run levels from its long-run path is eliminated whereas EXDEBT noticed 56 per cent of its divergence between the short-run levels from its long-run path is eliminated. In addition, the ECM could only explain 76% of the variations in RGDP.

Summary of Findings
In this study, the result above shows that there is a positive relationship between EXCHR, EXDEBT and RGDP whereas a negative relationship exists between INFL and RGDP. This means that any change in RGDP will cause an increase in EXCHR and EXDEBT by 159049.2 and 409.9191 respectively. The R2 of 0.90 approximately shows that 90% of the changes in RGDP were as a result of the performance of the explanatory variables employed, while the remaining 10% will be as a result of other variables not included in the model. This shows a very strong determination of the model. The econometric tests show that the model conforms to the OLS assumptions.

What the work suggests is that an increase in external debt burden will decrease economic growth if the funds borrowed are not properly utilized otherwise it will cause an increase in economic growth if the borrowed funds are properly utilized. Increase in inflation will crowd out private investments which will reduce economic growth. Also, an increase in the Nigerian exchange rate will increase RGDP while a decrease will, in turn, decrease economic growth. The F (Prob) value of 0.0000 shows that the explanatory variables employed in this study is statistically significant in explaining the performance of RGDP. This is because the F (Prob) value of 0.0000 is less than the 5% level of significance; as such we accept that the model is significant statistically.

In order to properly explain the relationship existing between external debt and economic growth, the researcher employed EXDEBT as a proxy for external debt burden while RGDP represents the economic growth. From the regression results, the t-statistic of 4.458146 with its corresponding probability value of 0.0001 shows that the calculated probability value is less than the 5% confidence interval and as such, there is a significant relationship between external debt burden and economic growth in Nigeria. From the regression results, the t-statistic of 7.151619 with its corresponding probability value of 0.0000 shows that the calculated probability value is less than the 5% confidence interval. And as such, there is a significant relationship between exchange rate and economic growth.

In order to properly explain the relationship existing between inflation and economic growth, from the regression results, the t-statistic of 0.353635 with its corresponding probability value of 0.7259 shows that the calculated probability value is greater than the 5% confidence interval and as such, there is no significant relationship between Inflation and economic growth in Nigeria. With such external debt burden, inflation adversely affects the economy with much money chasing few goods.

Conclusion
External Debt denotes the amount of money borrowed from other countries which are repayable at a defined time. It is the outstanding foreign liabilities that require the

payment of principal an interest at any point in the future. In this study, we have considered Diagnostic Analysis of the external debt burden on Nigeria's economic growth. The result shows that external debt burden stagnates economic growth in Nigeria as justified by the various variables used in this study. In a nutshell, there is a negative relationship between external debt burden and economic growth in Nigeria.

Policy Recommendations
With respect to the result of the study, we present the following recommendations:
1. Government through the relevant authorities should intensify the fight against corruption in order to ensure transparency and financial management discipline in the management of any borrowed funds. This will help stimulate production in the economy.
2. The government should design and set up a Monitoring, Evaluation and implementation Directorate under the Presidency charged with the responsibility of ensuring efficient and effective monitoring, evaluation and utilization of borrowed funds into productive investment with periodic feedback mechanism.
3. Government should ensure periodic debt servicing and repayments as at when due to avoid unnecessary debt rescheduling and debt overhang as this adversely affect economic growth in Nigeria.
4. Government should further stimulate and invest more in domestic production to liberate the
5. Nigerian economy from the shackles of wants and excessive dependence on external borrowing to finance production, which build up Debt. This will increase domestic production in all sectors of the economy and ensure self-reliance and possible debt-free economy.
6. The current agitation for restructuring and Diversification of the Nigeria economy through rapid and coordinated industrialization is required to overcome debt burden.
7. The researcher recommends that further studies should be undertaken in this area to further establish the ever-pressing problem of external debt burden facing Nigeria using other variables like on debt/BOP ratio, debt-export ratio, interest/export ratio etc.

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