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AN EMPIRICAL ANALYSIS OF THE IMPACT OF EXTERNAL BORROWING ON ECONOMIC PERFORMANCE OF NIGERIA.

by

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ABSTRACT

The study, which relied on secondary data, investigated the relationship between foreign borrowing and economic growth in Nigeria. The study employed both the quantitative and qualitative methods in analysing the data. This is a major gap the study filled up amidst existing literature as it adopted its own structural and working equation models peculiar to growth and development in Nigerian economy. The study adopted Ordinary Least Square (OLS) method, Augmented Dickey-Fuller (ADF) Unit Root test, Johansen Co-integration test and Error Correction Method (ECM). The estimation technique follows a three-step modelling procedure. The estimates indicate that there is an overall; a long run relationship exists among the variables. Conclusively, the result shows that external debt burden is an important factor indicator that influences the level of economic activities in Nigeria.

Keywords: External debt, Economic growth and development, External borrowing foreign direct investment, and political stability
Introduction

No economy is an island on its own; it would require aid so as to perform efficiently and effectively. One major source of aid is foreign borrowing or external debt. The motive behind external borrowing is due to the fact that countries especially the developing ones lack sufficient internal financial sources and this calls for the need for foreign aid (Sulaiman, L.A, Azeez, B.A; 2012). It is also expected that developing countries, facing a scarcity of capital, will seek external borrowings to supplement domestic saving (Pattillo et al, 2002; Safdari and Mehrizi, 2011).

The dual gap analysis provides the framework which shows that the development of nations is a function of investment and that such investments which require domestic savings is not sufficient to ensure that development takes place (Olayede, 2002). Hence, the importance of external borrowing on growth process of a nation cannot be overemphasized. Hammeed, Ashraf, and Chaudhary(2008) stated that external borrowing is ought to accelerate economic growth especially when domestic financial resources are inadequate and need to supplement with funds abroad.

External borrowings are a major source of public receipts. The accumulation of external debt should not signify slow economic growth. It is country’s inability to meet its debts obligations compounded by the lack of information on the nature, structure, and magnitude of external debt (Were, 2001). Soludo (2003) opined that countries borrow for two broad categories; macroeconomic reasons to either finance higher investment or higher consumption and to circumvent hard budget constraints. This implies that an economy borrow to boost economic growth and alleviate poverty. He argued that when debt reaches a certain level, it becomes to have adverse effect, debt servicing becomes a huge burden and countries find themselves on the wrong side of the debt-laffer curve, with debt crowding out investment and growth.

According to Omoleye, Sharma, Ngussam and Ezeonu (2006), Nigeria is the largest debtor nation in the sub-Saharan Africa. The genesis of Nigeria’s external debt can be traced to 1958 when
28 million US dollars was contracted from the World Bank for railway construction. Between 1958 and 1977, the need for external debt was on the low side. However, due to the fall in oil prices in 1978 which exerted a negative influence on government finance, it became necessary to borrow to correct balance of payment difficulties and finance projects. The first major borrow of 1(one) Billion US Dollars referred to as jumbo loan was contracted from international capital market (ICM) in 1978 increasing the total to 2.2 Billion US Dollars (Adesola, 2009). The spate of borrowing increased thereafter with the entry of the state government into external loan contractual obligation. According to Debt Management Office (DMO), Nigeria’s external debt outstanding stood at N17.3 billion. In 1986, Nigeria had to adopt a World Bank/International Monetary Fund (IMF) sponsored Structural Adjustment Program (SAP), with a view to revamping the economy making the country better-able to service her debt (Ayadi and Ayadi, 2008).

However, given the number of years, since Nigeria had been independent and the substantial debt it had incurred, coupled with the existing institutions, one can claim that the entire spectrum of the economy has not been sufficiently active, especially when compared with the economy of similar or lesser aged developing countries. The main interest of this study then is to investigate the effect of external borrowings on the economic growth of Nigeria.

**Literature Review**

**Conceptual Clarification**

Government debt are debt owe by the government within its economy or externally. According to CBN (2010), foreign debt or external borrowings are debt obligations the government owes to multilateral bodies, London Club, Paris Club, foreign promissory notes and other unclassified external borrowings. Debt instruments are IOU (I owe you) certificates, that is, certificates that acknowledge indebtedness. They are the tools governments often use to borrow money from the public. In principles, state and local government can also issue debt instrument, but
limited in their ability to issue such. In Nigeria, public debt instruments consist of Nigerian Treasury certificates, Federal government development stocks and treasury bonds (Adofu and Abula, 2010). Out of these, treasury bills, treasury certificates and development stocks are marketable and negotiable while treasury bonds; ways and means advances are not marketable but held solely by the central Bank of Nigeria. The Central Bank of Nigeria (CBN) is the banker and financial adviser to the federal government and as such, it is charged with the responsibility for managing the public debt.

Economic performance encompasses economic growth and development. But, the concept ‘economic development’ has in some cases been used interchangeably with economic growth (Todaro and Smith, 2003). Unarguably, however, economic growth has a narrower scope. Economic growth is a rise in the productive capacity of a country on a per capita basis. It involves the expansion of the economy through a simple widening process (Eleje and Emerole, 2010). It is the increase in the national output or GDP of the nation (Hogendorn, 1992). Economic development on the other hand is brooder. Idam, (2007) argues that economic development involves economic growth plus sustained structural changes that enhance the living standard of the wider segment of the society.

According to Hla and Krueger (2009) economic development is the increase in the standard of living in a nation's population with sustained growth from a simple, low-income economy to a modern, high-income economy. Also, if the local quality of life could be improved, economic development would be enhanced. Its scope includes the process and policies by which a nation improves the economic, political, and social well-being of its people (O'Sullivan & Steven; 2003). The nature of the relationship between public external borrowings and economic performance of nations has over the years been a subject of academic debate.
Empirical Review

Amaeteng and Amoako-Adu (2002) the empirical study declared that there is a unidirectional and positive causal relationship between foreign debt service and GDP growth after excluding exports revenue growth for Africa and South of Saharan countries during 1983-1990. {Afxention and Serletis, 2004(a)}. These people argued that whether indebtedness impacts on the economic activity of developing countries. It is also argued that if foreign loan are converted into capital and other necessary inputs, development will occur. On the other hand, if borrowing countries misallocate resources or divert them to consumption, the economic development is negatively affected. This study employs the frame work of granger. In doing so, six measure of indebtedness were used as proxies for the multiple mechanisms.

Arias (2002) showed a striking diversity of experience with growth episode and poverty changes. This became clear in the study carried out by him where it is seem that while some countries over some periods achieve a significant reduction in poverty as the economy grower others obtain much less appreciable progress. He then concluded that how growth reduces poverty depends on the pattern of growth as well as on the initial inequality of income and assets and its evolution over time.

Ocampo (2004) proclaimed that the external debt situation for number of low income countries, mostly in Africa has become extremely different. For their countries, even fill use of traditional mechanism of rescheduling and debt resection together with continued provision of confessional financing and purist of sound economic policies may not be sufficient to attain sustainable external debt levels within a reasonable period of time and without additional external support. Despite the efforts made by countries themselves and the commitment made by the international communities; they are failing behind in their endeavour to achieve the “Millennium Development Goals”.
Asley (2002) opined that high level of external debt in developing country negatively impact their trade capacities and performance.

Debt overhang affects economic reforms and stable monetary policies, export promotion and a reduction in certain trade barrier that will make the economy more market friendly and this enhances trade performance.

Furthermore, debt decreases a government ability to invest in producing and marketing exports, building infrastructure, and establishing a skilled labour force.

Muhtar (2004) also stated that, the service of these debts have direct negative impact on economic development. He says “debt services encroach on resources needed for socio economic development and poverty reduction. It also contributed to negative net resources flow”.

Anyanwu et al (1997) was of the opinion that whole scale of white elephant development project in the country is the root cause of our external debt problems. He said instead of emphasis being placed on small rural development project so as to reverse the chaotic trend of urbanization and lessen the opportunity for corruption.

According to Nweke (1990) a correct analysis of external debt in a third world countries such as Nigeria must be replace in the content of the country’s forceful integration into the western structural and dominated world capitalist economy as a peripheral appendage that provide natural resources and cheap lab our for the industrialization process in the west include lucrative markets for surplus of the advanced country’s manufacturers and the advance countries get a very high cost of the manufactured product of the west.

In yet another study showing an in slight from cross-country regression analysis by Hasen (2001) on the impact of aid and external debt in growth and investment the regression result were suggestive of a series of interesting relationships. This then is to say as a result of the explanatory regression there is quite strong evidence of positive impact of aid both on the growth rate in GDP per capital and the investment rate.
In Tanzania according to Oxfam (1998) experience illustrated that the effects of debt of beyond finance to impact on the lives of vulnerable household. Give the limited domestic revenue available to government in Tanzania, the claims of foreign creditor reached alarming proportion while public sector external debt absorbs over 40 percent of domestic revenues. Pattillo, Ricci and Poirson (2001), in their paper assessed the non-linear impact of external debt growth using a panel data of ninety three (93) countries over 1969-98 employing econometric methodologies. Their funding suggested the average impact of debt becomes negative at about 160-170 percent of export or 35-40 percent of gross domestic product (GDP).

Ojo (1989), was of the belief that it is no exaggeration to claim that Nigeria huge external debt is one of the hard knots of the Structural Adjustment Programme (SAP) introduce in 1986 to put the economy on a sustainable path of recovery. The corollary of this statement is that of only the high level of debt service payment could not reduce significantly; Nigeria would be in a position to finance larger volume of domestic investments, which would enhance growth and development, but more often than not, a debtor as only limited room to mange a debt crisis to advantage.

Smyth and Hsing (1995) have tried to test the federal government debts impact on economic growth and examine if an optimal debt ratio exists that will maximize the economic growth. The author calculated the optimal debt ratio (DEBT/GDPT), which represents the maximum real GDP growth rate (38.4%). The DEBT/GDP ratio corresponding to the maximum GDP growth rate is 38.4 percent. Chowdrg (1994) argued that, external debt burden leads to bad management in highly indebted countries such as exchange rate mismanagement. The expectation of currency devaluation leads to speculative capital flight. Devaluation also causes the currency cost of debt service obligations, deteriorates budget deficit and affect money supply and inflation.

According to Elbadawi et al (1996), these debt burden indicators also affect growth indirectly through their impact on public sector expenditures. As economic conditions worsen, governments find themselves with fewer resources and public expenditure is cut. Part of this
expenditure destined for social programs has severe effects on the very poor. Clements et al, (2003) examined the channels through which external debt affects growth in low-income countries. Their results suggest that the substantial reduction in the stock of external debt projected for highly indebted poor countries (HIPC) would directly increase per capita income growth by about 1 percentage point per annum. They noted that reductions in external debt service could also provide an indirect boost to growth through their effects on public investment. They argued that if half of all debt-service relief were channelled for such purposes without increasing the budget deficit, then growth could accelerate in some HIPC by an additional 0.5 percentage point per annum.

Borensztein (1990) found that debt overhang had an adverse effect on private investment in Philippines. The effect was strongest when private debt rather than total debt was used as a measure of the debt overhang. Iyoha (1996) found similar results for SSA countries. He concluded that heavy debt burden acts to reduce investment through both the debt overhang and the ‘crowding out’ effect.

Elbadawi et al, (1996) also confirmed a debt overhang effect on economic growth using cross-section regression for 99 developing countries spanning SSA, Latin America, Asia and Middle East. They identified three direct channels in which indebtedness in Sub-Sahara Africa works against growth: current debt inflows as a ratio of GDP (which should stimulate growth), past debt accumulation (capturing debt overhang) and debt service ratio. The fourth indirect channel works through the impacts of the above channels on public sector expenditures. They found that debt accumulation deters growth while debt stock spurs growth. Their results also showed that the debt burden has led to fiscal distress as manifested by severely compressed budgets.

Ajayi and Oke (2012) investigation of the effect of external debt burden on economic growth and development of Nigeria using regression analysis of OLS showed that external debt burden had an adverse effect on the nation income and per capital income of the nation. They observed that the magnitude of the external debt outstanding mounted pressure on the economy
since the eruption of the oil crisis in 1981 due to the rapid accumulation of trade arrears from 1982. The debt problem had been traced to the fall in the crude oil prices, collapse in commodity prices and the protracted softening of the world market since 1981 with the resultant decline in foreign exchange earnings and pressure on the balance of payment.

Sulaiman and Azeez (2012) examine the effect of external borrowing on the economic growth of Nigeria using econometric techniques of Ordinary Least Square (OLS), Augmented Dickey-Fuller (ADF) Unit Root test, Johansen Co-integration test and Error Correction Method (ECM) and found that external debt has contributed positively to the Nigerian economy. Oke and Sulaiman (2012) also examine the impact of external debt on the level of economic growth and the volume of investment in Nigeria and found that the current external debt ratio of GDP stimulates growth in the short term, but the Private Investment which is measure of real and tangible development shows a decline.

Based on the assertion that debt, whichever type or form, is a major problem militating against African development stride, Osuji and Ozurumba (2013) investigate the impact of external debt financing on economic growth in Nigeria with data covering 1969 to 2011. The VEC model estimate shows that London debt financing possessed positive impact on economic growth while Paris debt, Multilateral and Promissory note were negatively related to economic growth in Nigeria.

Ezeabasili et al (2011) investigate the relationship between Nigeria’s external debt and economic growth between 1975 and 2006 applying econometric analyses. The result of the error correction estimates revealed that external debt has negative relationship with economic growth in Nigeria. They stated that Nigeria must be concerned about the absorptive capacity noting that consideration about low debt to GDP, low debt service/GDP capacity ratios should guide future debt negotiations.

Ojo (1996) affirms that it is no exaggeration to claim that Nigeria’s huge external debt is one of the hard knots of the Structural Adjustment Programme introduced in 1986 to put the
economy back on as sustainable path of recovery. The corollary of this statement is that if only the high level of this debt service payment could be reduced significantly, Nigeria would be in a position to finance larger volume of domestic investment, which would enhance growth and development. But, more often than not a debtor has only a limited room to manage a debt crisis to advantage.

However, Cohen’s (1993) results on the correlation between developing countries (LDCs) debt and investment in the 1980s showed that the level of stock of debt does not appear to have much power to explain the slowdown of investment in developing countries during the 1980s. It is the actual flows of net transfers that matter. He found that the actual service of debt ‘crowded out’ investment.

**Methodology**

The study employed data that are secondary in nature. The annual time series data was obtained from the Central Bank of Nigeria Statistical Bulletin and Debt Management Office from 1990-2013. The methods of analysis or estimation techniques include Ordinary Least Square (OLS) method, Augmented Dickey-Fuller (ADF) Unit Root test, Johansen Co-integration test and Error Correction Method (ECM). The estimation technique follows a three-step modelling procedure;

i. The stationarity of data must be established and the order of integration determined.

ii. After establishing the stationarity of data, Johansen co-integration test is applied.

iii. When the variables are found to be co-integrated, an over-parameterized model (ECM1) is developed which involves leading and logging of the variables, after which a parsimonious model (ECM2) is built which introduces short run dynamism into the model.

The test of the hypotheses would be done at 5% level of significance and as such, the generalization of the study findings would be limited to this extent.

**Model specification**
The study hypothesized that external borrowing does not have a significant effect on the economic performance of Nigeria. The model proxied Gross Domestic Product (GDP) as the endogenous variable to measure economic growth while External Borrowing (EXB), Ratio of External Borrowing to Exports (EXB/X), Inflation (INF) and Exchange Rate (EXR) represents the exogenous variables.

The a priori expectation for the coefficients in the model are $b_1, b_2, > 0$ while $b_3, b_4, < 0$.

The econometric form of the model is specified as:

\[
GDP = f \left( EXB, EFDI, INF, EXPT \right)
\]

The econometric equation becomes:

\[
GDP = b_0 + b_1 \text{EXB} + b_2 \text{FDI} + b_3 \text{INF} + b_4 \text{EXPT} + u_i \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots (i)
\]

Where;

$b_0$ = Intercept of relationship in the model/constant

$b_1 - b_4$ = coefficient of each exogenous variable

$u_i$ = Error term Stating the error correction model (ECM)

From equation (i), the model becomes:

\[
\Delta \text{Log EXPT}_t - 1 = b_0 + b_1 \sum \text{Log EXB}_t - 1 + b_2 \sum \text{Log FDI}_t - 1 + b_3 \sum \text{Log INF}_t - 1 + b_4 \sum \text{Log EXPT}_t - 1 + \sum \text{ECM}_t - 1 + \sum t \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots (ii)
\]

Where;

$\sum \text{ECM}$ = Error Correction Term

$t - 1$ = Variable lagged by one period

$\sum t$ = White noise residual.

The hypothesis for the co-integration test is stated thus;

Null hypothesis ($H_0$): $b_1=b_2=b_3=b_4=0$ (No Co-integration)

Alternative hypothesis ($H_1$): $b_1 \neq b_2 \neq b_3 \neq b_4 \neq 0$ (Co-integration exists)
This econometric method would be used because it is very reliable and widely used in researches.

**Empirical Results**

The current specification and estimation of our model requires that we test the time series properties of the data in order to determine whether or not the variables contain integrated components, hence we used the Augmented Dickey Fuller (ADF) test, the cointegration test and the Ordinary least squares method.

**Table 1: Summary of Ordinary least squares Results**

<table>
<thead>
<tr>
<th>INDEPENDENT VARIABLE</th>
<th>DEPENDENT VARIABLE (GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Estimates</td>
</tr>
<tr>
<td>Constant</td>
<td>100809.3</td>
</tr>
<tr>
<td>t-Value</td>
<td>-4.041622</td>
</tr>
<tr>
<td>EXD</td>
<td>0.221</td>
</tr>
<tr>
<td>t-Value</td>
<td>1.687826</td>
</tr>
<tr>
<td>FDI</td>
<td>0.019486</td>
</tr>
<tr>
<td>t-Value</td>
<td></td>
</tr>
<tr>
<td>INF</td>
<td>1788.701</td>
</tr>
<tr>
<td>t-Value</td>
<td>2.18696</td>
</tr>
<tr>
<td>EXPT</td>
<td>0.079478</td>
</tr>
<tr>
<td>t-Value</td>
<td>7.136928</td>
</tr>
<tr>
<td>R2</td>
<td>0.820173</td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>0.799621</td>
</tr>
<tr>
<td>F-Value</td>
<td>39.90789</td>
</tr>
<tr>
<td>DW</td>
<td>1.8643</td>
</tr>
</tbody>
</table>

N.B Figures in parentheses represents the various t – values

The result in table 1 shows that External debt burden (EXB), foreign direct investment (FDI), inflation (INF) and Export (EXPT) have a positive relationship with economic growth (GDP), thus if EXB, FDI, and EXPT increased by a unit each GDP is expected to increase by 0.022100,
The positive impact of external debt burden on economic growth reflects a situation where by an economy GDP is growing without developing, this also reflect the situation in Nigeria despite the huge external debt, their GDP is still growing because Nigeria still contract further External debt. However, the result shows that external debt burden and foreign direct investment are statistically insignificant but positively related to economic growth this may be due to the fact that the borrowed external fund was not used for the purpose it was met for or misappropriated into personal. Inflation and Export are statistically significant in explaining the level of economic growth in Nigeria. In the Nigerian case this may be as a result of the fact that a country that is heavily indebted still exports some of its products or the heavily indebtedness of the Nigerian economy does not stop them from exporting their crude petroleum to other foreign countries which invariably will make economic growth to be significant. The value of F- statistics with a value of 39.90789 shows that the equation has a good fit that is the explanatory variables are good explainer of changes in economic growth in the Nigerian economy. The Durbin Watson statistics with a value of 1.8643 illustrates the absence of autocorrelation among the variables in the model.

**Unit Root Test**

This tests the relevant variables in equation 2 which are stationary and equally to determine their order of integration. We equally use the Augmented Dickey fuller (ADF) test to find the existence of unit root in each of the time series. The summary of the ADF unit root test is presented in table two below.

**Table 2: Summary of ADF unit Root test Result**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Data</th>
<th>1st diff.</th>
<th>1%</th>
<th>5%</th>
<th>10%</th>
<th>status</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>1.34</td>
<td>-3.90</td>
<td>-2.93</td>
<td>-2.60</td>
<td>1(1)</td>
<td></td>
</tr>
<tr>
<td>EXB</td>
<td>-2.33</td>
<td>-4.31</td>
<td>-3.61</td>
<td>-2.93</td>
<td>1(1)</td>
<td></td>
</tr>
</tbody>
</table>
The result reveals that all the variables were not found stationary at levels. This can be seen by comparing the observed values (in absolute terms) of the ADF test statistics at the 1%, 5%, and 10% levels of significance. In the table above the result shows that GDP, EXD, FDI, and EXPT are all stationary after taking their first difference. Since all these stated variables were stationary at first difference and on the basis of this, the null of non stationarity is rejected and it is safe to conclude that the variables are stationary. This implies that the variables are integrated of order one i.e I (1). For inflation (INF) the variable was stationary at levels that is order of I (0).

Co-integration Test Results and Analysis

The result of the co-integration (that is the existence of a long term linear relation) is presented in table 3 below. Trace statistics and maximum Eigen value using methodology proposed by Johansen and Juselius (1990). Having confirmed the stationarity of the variables at 1(1) we proceed to examine the presence or non-presence of co-integration among the variables, when co-integrating relationship is present, it means that the variables have long run relationship. In the co-integrating result the likelihood ratio (LR) indicates a 2 co-integrating equations. The Johansen co-integrating test revealed that the likelihood ratio rejects the Null hypotheses of R=0 and R=1 of no cointegration and accepts the alternative hypotheses of a long run relationship. Overall a long run relationship exists among the variables. Conclusively, the result shows that external debt burden is an important factor indicator that influences the level of economic activities in Nigeria.

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International Monetary Fund Washington DC


