

Research article

# EXTERNAL DEBT AND ECONOMIC GROWTH: EVIDENCE FROM NIGERIA

**Shehu Usman Hassan PhD**

Department of Accounting  
Ahmadu Bello University, Zaria-Nigeria  
[Shehu.hassanus.usman@gmail.com](mailto:Shehu.hassanus.usman@gmail.com)  
Tel: +2348067766435, +2348057777085

**Aliyu Mamman PhD**

Department of Business Administration  
College of Business Administration and Management Studies  
Kaduna Polytechnic, Kaduna – Nigeria  
[Mammanaliyu1@yahoo.com](mailto:Mammanaliyu1@yahoo.com)  
+2348037850919

---

## Abstract

This study investigates the contribution of external debt to the economic growth of Nigeria. The study employed data from 1970 to 2010 which were sourced from Statistical Bulletin of Central bank of Nigeria and Annual Reports of the Debt Management Office. It used real gross domestic product as the proxy for economic growth being the dependent variable and external debt, debt service payment, export, inflation and exchange rate as the explanatory variables. The augmented Dickey Fuller Unit Root test and Johansen Co-integration test are used to ascertain the Stationarity and the long run equilibrium relationship between the variables respectively. The econometric technique of Ordinary Least Square (OLS) was used for the data analysis. The findings of the study reveal that external debt contributes positively to the economic growth of Nigeria. Therefore, the study recommends that external borrowings should be channeled to the real sectors of the economy for the impact to be felt in the country. **Copyright © IJEBF, all rights reserved.**

**Keywords:** External Debt, Debt Service Payment, Economic Growth, Real Gross Domestic Product.

---

## 1. Introduction

No country lives in isolation and no economy is self sufficient. This leads to countries depending on each other on social, political and economic grounds. Due to inadequacy of resources, countries are often faced with budget deficit. Hence, governments borrow to fill the vacuum created by the fiscal gabs in the

proposed expenditure and expected revenue within a fiscal period (Ogunmuyiwa, 2011). He further stated that when tax revenue is limited and government does not want to compromise macroeconomic stability by printing more money, then debt option becomes the only available avenue that the government can explore to provide infrastructures for the citizenry.

Countries borrow for two broad categories; macroeconomic reasons to either finance higher investment or higher consumption and to circumvent hard budget constraint. This implies that countries borrow in order to enhance economic growth and ameliorate the living conditions of the people. Sustainable economic growth is of predominant concern for all economies, especially for the developing economies which commonly face burgeoning fiscal deficits mainly driven by higher levels of debt servicing, particularly external debt servicing and widening current account deficits (Shabbir, 2009).

In developing countries, external debt is the main part of the public debt structure (Atique and Malik 2012). Hameed, Ashraf and Chaudhary, (2008 in Sulaiman and Azeez, 2012), state that external borrowing ought to accelerate economic growth especially when domestic financial resources are inadequate and need to be supplemented with funds abroad. Sulaiman and Azeez (2012) opine that the accumulation of external debt should not signify slow economic growth. It is a country's inability to meet its debt obligation compounded by the lack of information on the nature, structure and magnitude of external debt (Were, 2001). Hence, the importance of external debt on the economic growth of Nigeria cannot be overemphasized.

External debt is acquired in order to finance budget deficit and speed up economic activities, hence, external debt should result to economic growth of a nation. Countries can have heavy external debt along with relatively higher level of exports that may help to sustain their level of external debt. But external debt, if not sustainable, imposes higher risk to the economic prosperity, as its servicing which is also an indicator of higher current account deficit, may lead to debt overhang in a country (Shabbir, 2009). 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-latter curve, with debt crowding out investment and growth. The debt service burden has militated against Nigeria's rapid economic development and worsened the social problems (Audu, 2004).

Nigeria's external indebtedness dates back to pre-independence period. However, the quantum of the debt was small until 1978. The debts were not much of a burden on the economy because the loans were obtain on soft terms. Moreover, the country had abundant revenue receipts from oil, especially during the oil boom of 1973 – 1976. The decades of the 1950s and 1960s are often described as "GOLDEN YEARS" for developing countries in most economic development literature because the rate of growth of these economies was not just high but was mostly internally generated. In these decades, the less developed countries (LDCs) increased their investment with less reliance on external resources (Ajayi and Oke, 2012). However, the fall in oil prices and hence oil receipts in 1977/78 forced the country to raise the first jumbo loan of more than \$1.0 billion from the international capital market.

According to Debt Management Office (DMO), Nigeria's external debt stock till 1977 was less than US \$0.8 billion. Beginning from 1978, the external debt stock began to grow astronomically, rising from US \$0.763 billion in 1977 to US \$5.09 billion in 1978 and US \$8.855 billion in 1980. By 1985 it grew to nearly US \$19 billion. The debt profile had deteriorated seriously due to persistent inability of the country to meet its external debt service obligations. This resulted in mounting arrears and unmanageable growth of the debt stock relative to available resources. As at 31<sup>st</sup> December, 2002, the total external debt outstanding stood at US \$30.99 billion and peaked at US \$37.76 billion in 2004 and declined to US \$7.69 billion in 2006. The decline was due to the 2005 cancellation agreement between Nigeria and Paris Club of lending nations. The effort of Nigerian government to negotiate for debt cancellation and relief has dropped the external debt stock by a significant proportion (Omotoye et al, 2006 in Abubakar, 2011).

Suleiman and Azeez (2012) opined that the resultant effect of large accumulation of debt exposes the nation to high debt burden and its servicing is a major threat to the growth of the nation. While Nigeria is experiencing growth in its stock of external debt, the country witnessed economic growth up to 1970s and thereafter seems to be crawling and retrogressing in some aspects. This is evident in the fact that the oil-

rich country has been hobbled by political instability, inadequate and inefficient infrastructures, poor educational system, inadequate and inefficient health facilities, corruption, unemployment, inflation and poor macroeconomic management. This study therefore, seeks to investigate whether external debt contributes to the economic growth of Nigeria.

Though there are many studies on the effects of external debt on Nigeria's economic growth, however, these studies provide diverse debate-able findings (See Suleiman and Azeez, 2012, Ajayi and Oke, 2012, Ogunmuyiwa, 2011, and Abubakar, 2010). Some findings show that external debt has adverse effect on the nation, while others show that it has positive effect. Still, others reveal that causality does not exist between external debt and economic growth. Hence, given rise to the importance of this study.

The study postulates that external debt does not contribute to the economic growth of Nigeria. The review of literature is the focus of the next section, section three deals with methodology and robustness tests, section four dwells on results and discussions while section five provides the conclusion and the recommendations.

## **2.1 Literature Review and Theoretical Framework**

All over the globe, raising sufficient funds to finance government projects within budget has been a major challenge, and implementing budgets devoid of deficits seems to be an illusion for most developing countries (Mailafiya, 2010). Due to inadequate internal financial resources, countries borrow from external sources. External debt is that part of the total debt in a country that is owed to creditors outside the country. The debtors can be the government, corporations or private households.

Sustainable debt is the level of debt which allows a debtor country to meet its current and future debt service obligations in full, without recourse to further debt relief or rescheduling, avoiding accumulation of arrears, while allowing an acceptable level of economic growth (UNCTAD/UNDP, 1996). But unsustainable external debt is a great threat to the economic prosperity because of the higher debt service charges which is the factor of the higher current account deficit which ultimately may results to debt overhang (Atique and Malik, 2012).

Both developed and developing nations seek for external debt to boost their economic performance (Kletzer & Wright, 1999; Eaton and Gersovitz, 1981 in Abubakar 2011). According to Abubakar (2011), Nigeria has been utilizing the external debt to the extent that the debt becomes so huge to water down substantial part of the country's revenue. Ali (2012), external debt plays both a positive and negative role in shaping economic growth, particularly of the developing countries. External debt is helpful when the government utilizes it for investment-oriented projects such as power, infrastructure and the agricultural sector. On the other hand, it would affect negatively when it is used for private and public consumption purposes, which do not bring any return.

Empirical studies on the effect of external debt on the debtor's economy revealed diverse views. Iyoha (1999) found an inverse relationship between debt overhang, crowding out and investment and concluded that external debt depresses investment, thus affecting economic growth. Geiger (1990) also found a statistically significant inverse relationship between the debt burden and economic growth. Though Were (2001) did not find any adverse impact of debt servicing on economic growth; however, it confirmed some crowding-out effects on private investment. Study by Mohammed (2005) concluded that external debt and inflation deter economic growth, while, real exports have positive and significant impact on economic growth. The study of Fosu (1996) reveals that GDP is negatively influenced via a diminishing marginal productivity of capital. Other studies in line with the above include: Atique and Malik (2012); Karogol (2002); Hameed et al (2008); Deshpande (1997) and Malik, Hayat and Hayat (2010).

The study of Arshanalp and Henry (2004) found relationship between debt and growth. They argued that the problem faced by debt-relieved countries is lack of good institutions. Also, studies by Cohen (1995) and Elbadawi et al. (1997) show similar findings. However, the work of Cohen (1993) shows that the level of

debt does not explain the slowdown of investment in highly rescheduling developing countries. On causality, the study by Nawaz, Qureshi and Awan (2012) shows evidence of long run relationship between external debt and economic growth. In the short run, there is bidirectional causality between external debt and economic growth. Afxentiou and Serletis (1996) found that no causality exists between debt and income. Karagol (2002) however, found a unidirectional causality from debt to economic growth.

Ojo (1989 in Ajayi and Oke 2012), 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) introduced in 1986 to put the economy on a sustainable path of recovery. To Anyanwu et al (1997), the whole scale of white elephant development project in the country is the root cause of our external debt problems. A number of empirical researches related to Nigeria also came up with different findings. Ajayi and Oke (2012) studied the effect of external debt on economic growth and development of Nigeria. Their finding indicates that external debt burden had an adverse effect on the nation income and per capital income of the nation. Similar studies by Sulaiman and Azeez (2012) found from the error correction method that external debt has contributed positively to the Nigerian economy. The study of the impact of external debt on economic growth and public investment in Nigeria by Audu (2004) concluded that debt servicing pressure in Nigeria has had a significant adverse effect on the growth process of the country. Ogunmuyiwa (2011) in his studies, "does external debt promote economic growth in Nigeria"; using granger causality test, the results revealed that causality does not exist between external debt and economic growth in Nigeria.

## 2.2 Theoretical Framework

**The Dual Gap Analysis:** This explains that development is a function of investment and that such investment which requires domestic savings, is not sufficient to ensure that development take place. There must be the possibility of obtaining from abroad the amount that can be invested in any country with the amount that is saved. Furthermore, the domestic resources are to be supplemented from abroad, such as excess of import over export (i.e,  $M > E$ )

**Debt Overhang Theory:** Debt overhang refers to a situation where the debt stock of a nation exceeds its future capacity to repay it. Such a country's debt stock exceeds its ability to repay. The economy is in bad shape and will continue to decline, because it results in less money spent on education, infrastructures and health. According to the debt overhang theory, when countries have higher external debt to GDP ratio, they may find relatively less funds available to provide an environment conducive for business and promote investment, which further deteriorate the current level of economic growth.

**The Liquidity Constraint Hypothesis:** This states that an increase in external debt servicing leaves less avenues for developing countries to service their debt, that, therefore, affect their ability to borrow further from external resources, putting pressure on domestic borrowing and leading to crowding out. Crowding out occurs when increased government borrowing, a kind of expansionary fiscal policy, reduces investment spending.

This study adopts the debt overhang theory and the liquidity constraint hypothesis because they both explained the debt situation of most developing countries.

## 3.1 Methodology and Robustness Tests

The study adopted ex-post facto research design. Annual time series data from 1970 to 2010 were sourced from Central Bank of Nigeria Statistical Bulletin (2007 and 2010) and Annual Reports of Debt Management Office. The secondary data gathered were analysed using Ordinary Least Square (OLS), Augmented Dickey-Fuller (ADF) Unit Root Test, Johansen Co-integration test and Error Correction Method (ECM).

## 3.2 Variable Measurement

This study on the contribution of external debt to Nigeria’s economic growth employs Real Gross Domestic Product (RGDP) as the dependent variable to proxy economic growth while External Debt (EXD), Debt Service Payment (DSP), Export (EXPT), Inflation (INF) and Exchange Rate (EXCR) are the explanatory variables serving as proxies for external debt. From the data sourced, inflation and exchange rate are in decimals, but other variables were in millions of naira, hence, the dependent and the explanatory variables that were in millions were transformed. The tool of natural logarithm (ln) was used for the transformation of the data in order to bring the variables to the same base.

### 3.3 Model Specification

To gauge the relationship between external debt and economic growth of Nigeria, multiple regression was used to estimate the relationship between the independent variables (EXD, DSP, EXPT, INF and EXCR) and the dependent variable (RGDP).

The functional relationship between the variables can be expressed as:

$$RGDP = f(EXD, DSP, EXPT, INF, EXCR)$$

The econometric form of the model becomes:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + U$$

Thus,

$$RGDP = \beta_0 + \beta_1 EXD + \beta_2 DSP + \beta_3 EXPT + \beta_4 INF + \beta_5 EXCR + U \dots \dots \dots (i)$$

Where:

- Y = RGDP (Real Gross Domestic Product)
- X<sub>1</sub> = EXD (External Debt)
- X<sub>2</sub> = DSP (Debt Service Payment)
- X<sub>3</sub> = EXPT (Export)
- X<sub>4</sub> = INF (Inflation)
- X<sub>5</sub> = EXCR (Exchange Rate)
- β<sub>0</sub> = Intercept or Constant
- β<sub>1</sub> - β<sub>5</sub> = Slope of the regression equation
- U = Error term

By extracting the residuals from equation (i), the model becomes:

$$\ln RGDP = \beta_0 + \beta_1 \ln EXD_{t-1} + \beta_2 \ln DSP_{t-1} + \beta_3 \ln EXPT_{t-1} + \beta_4 \ln INF_{t-1} + \beta_5 \ln EXCR_{t-1} + ECM_{t-1} + U_t$$

Where:

- ECM = Error Correction Term
- t-1 = Variable lagged by one period
- U<sub>t</sub> = Error term
- A priori expectation for the coefficients in the model:  
 β<sub>1</sub>, β<sub>3</sub> > 0 while β<sub>2</sub>, β<sub>4</sub>, β<sub>5</sub> < 0

## 4. Results and Discussion

This section deals with the analysis of data and the interpretation of results. In order to avoid misleading results, econometric theory requires that variables are stationary before the application of standard econometric techniques. This is because, time series data are assumed to be non stationary and the results obtained from the OLS method may be spurious.

#### 4.1 Robustness Tests

The result of the Stationarity test conducted is presented below.

**Table 1:** ADF Unit Root Test

| Variables | ADF Test Statistic Value | Critical Value                                      | Order of Integration |
|-----------|--------------------------|---|----------------------|
| RGDP      | -10.27473<br>(0.0000)    | 1% = -3.610453<br>5% = -2.938987<br>10% = 12.607932 | I(1)                 |
| EXD       | -4.721717<br>(0.0005)    | 1% = -3.610453<br>5% = -2.938987<br>10% = 12.607932 | I(1)                 |
| DSP       | -5.157552<br>(0.0001)    | 1% = -3.610453<br>5% = -2.938987<br>10% = 12.607932 | I(1)                 |
| EXPT      | -6.974144<br>(0.0000)    | 1% = -3.610453<br>5% = -2.938987<br>10% = 12.607932 | I(1)                 |
| INF       | -6.160291<br>(0.0000)    | 1% = -3.610453<br>5% = -2.938987<br>10% = 12.607932 | I(1)                 |
| EXCR      | -5.787631<br>(0.0000)    | 1% = -3.610453<br>5% = -2.938987<br>10% = 12.607932 | I(1)                 |
| ECM       | -7.726947<br>(0.0000)    | 1% = -3.610453<br>5% = -2.938987<br>10% = 12.607932 | I(1)                 |

**Source:** Author's Computation of result from E-views 6.0 Version

The results in table 2 show that all the variables are stationary at 1<sup>st</sup> difference, i.e. I(1) order of integration with the exception of ECM; which is stationary at level, i.e I (0) order of integration. Hence, the model follows integrating process.

The result of Johansen Cointegration test is presented below.

**Table 2:** Johansen Cointegration Test: Unrestricted Cointegration Rank Test (Trace)

| Hypothesized<br>No. of CE(s) | Eigenvalue | Trace<br>Statistic | 0.05<br>Critical Value | Prob.** |
|------------------------------|------------|--------------------|------------------------|---------|
| None *                       | 0.721347   | 131.4865           | 95.75366               | 0.0000  |
| At most 1 *                  | 0.540966   | 81.65278           | 69.81889               | 0.0042  |
| At most 2 *                  | 0.432788   | 51.28613           | 47.85613               | 0.0230  |
| At most 3                    | 0.378217   | 29.17229           | 29.79707               | 0.0589  |
| At most 4                    | 0.190133   | 10.64092           | 15.49471               | 0.2346  |
| At most 5                    | 0.060078   | 2.416371           | 3.841466               | 0.1201  |

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

**Source:** Extracted from E-views 6.0 Version

The result of the test indicates the presence of 3 cointegrating equations at 5 percent level of significance thereby confirming the existence of long-run equilibrium relationship between economic growth and the explanatory variables. This implies that the regression model is not spurious and the conclusions on them are valid.

## 4.2 Descriptive Statistics

**Table 3:** Descriptive statistics

|              | RGDP      | EXD       | DSP       | EXPT     | INF      | EXCR     |
|--------------|-----------|-----------|-----------|----------|----------|----------|
| Mean         | 11.63195  | 10.94732  | 8.975122  | 11.62000 | 19.40732 | 41.22731 |
| Median       | 11.39000  | 12.61000  | 10.20000  | 11.61000 | 13.70000 | 8.037800 |
| Maximum      | 16.54000  | 15.40000  | 13.97000  | 16.22000 | 72.80000 | 150.2980 |
| Minimum      | 6.590000  | 5.160000  | 4.180000  | 6.790000 | 3.200000 | 0.546400 |
| Std. Dev.    | 2.783824  | 3.460473  | 2.969689  | 2.983292 | 16.17505 | 55.48965 |
| Skewness     | -0.037362 | -0.457976 | -0.293863 | 0.104287 | 1.636606 | 0.938427 |
| Kurtosis     | 1.764396  | 1.714383  | 1.815174  | 1.575926 | 5.055510 | 2.061612 |
| Jarque-Bera  | 2.617681  | 4.256793  | 2.988274  | 3.538796 | 25.52086 | 7.522050 |
| Probability  | 0.270133  | 0.119028  | 0.224442  | 0.170436 | 0.000003 | 0.023260 |
| Sum          | 476.9100  | 448.8400  | 367.9800  | 476.4200 | 795.7000 | 1690.320 |
| Sum Sq. Dev. | 309.9870  | 478.9950  | 352.7620  | 356.0012 | 10465.29 | 123164.0 |
| Observations | 41        | 41        | 41        | 41       | 41       | 41       |

**Source:** Extracted from E-Views 6.0 Version

The table above shows that dependent variable, RGDP has a mean value of 11.63 and the variables in the table exhibits some levels of variability as in some cases, the mean is larger than the median indicating the skewness of the data. The maximum value of RGDP is 16.54 with minimum of 6.59. EXD has a maximum value of 15.40 and a minimum value of 5.16. DSP maximum value is 13.97 and its minimum value is 4.18 while the maximum value of EXPT IS 16.22 with 6.79 minimum. The control variables, INF and EXCR have maximum values of 72.80 and 150.30 with minimum values of 3.20 and 0.55 respectively. As per the extent of dispersion of the data, the overall value of EXCR (55.49) has the highest standard deviation and RGDP (2.78) has the lowest standard deviation.

From the table 3, it is explicit that the variables are not normally distributed; but since the values of skewness of all the variables lie between  $-\frac{1}{2}$  and  $\frac{1}{2}$  except the control variables and the kurtosis values of all the variables are less than 3 with the exception of INF acting as a control variable, the distribution is approximately symmetrical. These indicate non normality problem. This is further revealed by the values of Jarque - Bera as shown in the table.

The table 4 below presents the OLS results

**Table 4:** Regression Results

Dependent Variable: D(RGDP,1)  
 Method: Least Squares  
 Date: 03/25/13 Time: 22:50  
 Sample (adjusted): 1971 2010  
 Included observations: 40 after adjustments

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| D(EXD,1)           | -0.452039   | 0.231246              | -1.954801   | 0.0591   |
| D(DSP,1)           | 0.580325    | 0.180813              | 3.209524    | 0.0030   |
| D(EXPT,1)          | 0.590429    | 0.265870              | 2.220738    | 0.0333   |
| D(INF,1)           | 0.007023    | 0.007268              | 0.966303    | 0.3409   |
| D(EXCR,1)          | 0.007173    | 0.009784              | 0.733184    | 0.4686   |
| RESID01-1          | 1.223958    | 0.173454              | 7.056396    | 0.0000   |
| C                  | 1.255368    | 0.213890              | 5.869234    | 0.0000   |
| R-squared          | 0.658248    | Mean dependent var    |             | 0.215250 |
| Adjusted R-squared | 0.596111    | S.D. dependent var    |             | 1.045707 |
| S.E. of regression | 0.664570    | Akaike info criterion |             | 2.178276 |
| Sum squared resid  | 14.57457    | Schwarz criterion     |             | 2.473830 |
| Log likelihood     | -36.56551   | Hannan-Quinn criter.  |             | 2.285139 |
| F-statistic        | 10.59353    | Durbin-Watson stat    |             | 1.895105 |
| Prob(F-statistic)  | 0.000002    |                       |             | G        |

**Source:** Extracted from E-views 6.0 version

From the result above, external debt shows t-statistics of -1.954801 at a probability of 0.0591, which signifies that external debt is negatively significant to the economic growth of Nigeria. This implies that external debt has an inverse relationship with RGDP, hence adversely affects Nigeria's economic growth at significant level. That is, the more the acquisition of external debt, the more the economy decreases. This is contrary to a priori expectation that external debt impacts positively on the economy. It may be as a result of not channeling the debt funds to the real sectors that would impact positively on the economy; mismatch or diversion of the funds to private hands. The result is in line with the work of Ajayi and Oke (2012), Shabbir (2009), and contrary to the work of Sulaiman and Azeez (2010).

Debt service payment shows a t-statistics of 3.209524 at a probability of 0.0030, indicating that DSP is positively significant to the growth of Nigeria. This implies that DSP has a positive relationship with RGDP. Meaning that, the amount used in servicing external debt improves the economic position of Nigeria significantly. The result is contrary to the a priori expectation that DSP has a negative influence on the RGDP. This may be as a result of the fact that, it is good to pay debt. As the country pays its debts, it avoids the accumulation of interests and penalties. Servicing of debts also attracts foreign aids, foreign direct investments and so many international opportunities that can boost the economy in the long run. This result is in line with the findings of Ajayi and Oke (2012).

The result reveals that export has a t-statistics of 2.220738 at a probability of 0.0333, signifying that export is positively related to economic growth and impacting on it significantly. It implies that export influences or enhances Nigeria's economic growth significantly. This is in line with the a priori expectation that export earnings boost RGDP. This may be as a result of Nigeria's high earnings from petroleum export.

Inflation used as a control variable shows a t-statistics of 0.966303 at a probability of 0.3409, which indicates that inflation is positively insignificant to economic growth of Nigeria. It implies that inflation has a positive relationship with the RGDP; that is, the higher the inflation rate, the higher the RGDP but its impact is not significant. This is contrary to the a priori expectation that inflation should exert negative influence on the RGDP. The result is contrary to the work of Sulaiman and Azeez (2012) and Atique anque and Malik (2012).

Similarly, exchange rate used as a control variable shows a t-statistics of 0.733184 and probability value of 0.4686. This indicates that exchange rate is positively insignificant to Nigeria's economic growth. Implying that exchange rate has a positive insignificant relationship with RGDP. Hence, the higher the exchange rate, the higher the RGDP; though the impact is not significant. This is contrary to the a priori expectation that with higher exchange rate, the more the RGDP would be affected negatively. This may be as a result of

the fact that, high domestic currency would bring about high national income amount or nominal RGDP. This result is in line with the findings of Sulaiman and Azeez (2012).

Lastly, the ECM has t-statistics of 7.056396 at a probability of 0.0000, which reveals that it is statistically significant. It implies the existence of a long-run equilibrium relationship among the variables.

Cumulatively, the model shows that the coefficient of multiple determinations ( $R^2$ ) with a value of 0.658248 implies that approximately 66% of total variation in RGDP is explained by EXD, DSP, EXPT, INF and EXCR while the remaining 34% is accounted for by factors not specified in the model or not related to the included explanatory variables. The Durbin-Watson (DW) statistics is 1.895105. From the DW table, at 1 percent level of significance,  $n = 41$  observations and  $K^1 = 5$  explanatory variables, the significant points of  $d_L$  and  $d_U$  are  $d_L = 1.287$ , and  $d_U = 1.776$ . The calculated DW statistics of 1.895105 is greater than the  $d_U$  (1.776), which shows that there is no evidence of positive first-order serial correlation (Gujarati, 2009).

The F-statistics value of 10.59353 shows that the model is fit and significant at 1% level (0.000002) which confirms that the variables in the model sufficiently explain the contribution of external debt to economic growth in Nigeria. This further reveal that the result is not spurious and provide the basis for rejecting the null hypothesis that external debt does not contribute to Nigeria's economic growth.

This position is also in line with the Dual-gap analysis which argued that development is a function of investment and that such investment which requires domestic savings is not sufficient to ensure that development take place.

## 5. Conclusion and Recommendations

Every economy suffers from inadequate financial resources; hence, external borrowings become necessary in order to supplement the internal resources. Many developing countries have acquired external debt so much so that they are faced with critical problems of debt overhang and crowding out effect.

This study examined the contribution of external debt to the economic growth of Nigeria and concludes that external debt contributes positively to Nigeria's economic growth. The conclusion is drawn based on the findings of the study which reject the null hypothesis that external debt does not contribute to economic growth of Nigeria. The reason behind this result could be that, all things being equal, external debt should impact positively on economic growth.

However, this result seems to be contrary to the Nigeria economic situation; where external debt was growing without any growth in the economy. This is evident in Nigeria where there are no infrastructures and poor institutions yet having large stock of debt (which was only graciously reduced due to debt cancellation by Paris Club in 2005). The impact of external debt is not positively felt in Nigeria due to the fact that the funds are not always channeled to the real productive sectors, mismanagement and mismatch of the funds and/or diversion of the funds to private hands.

The study therefore, recommends that external borrowings should be channeled to the real sectors of the economy as against social consumption. The funds should be properly managed in order to avoid wastages and mismatch. Also, measures that would prevent the diversion of the funds should be instituted.

## References

[1]Abubakar, S., (2011). External Debt and Nigerian Economic Development: An Empirical Investigation. [www.abu.edu.ng/publications/2012-04-11\(161305\)](http://www.abu.edu.ng/publications/2012-04-11(161305)).

- [2] Afxentiou, P.C. and A. Serletis, (1996). Growth and Foreign Indebtedness in Developing Countries: An Empirical Study Using Long Term Cross-Country Data. *J. Dev. Areas*, 31(1): 25-40.
- [3] Ajayi, L. B. and Oke, M. O., (2012). Effect of External Debt on Economic Growth and Development of Nigeria: *International Journal of Business and Social Science*, Vol. 3. No.12.
- [4] Ali, A., (2012). External Debt and Economic Growth: Trends and Challenges-A Case Study of Pakistan (2000-2007).
- [5] Anyawu, (1997). *The Structure of Nigeria Economy*. PP631.
- [6] Arslanalp, S. and P.B. Henry, (2004). Helping the Poor to Help Themselves: Debt Relief or Aid?, Working Paper 10234, National Bureau of Economic Research, Cambridge, MA.
- [7] Atique, R., and Malik, K., (2012). Impact of Domestic and External Debt on the Economic Growth of Pakistan. *Word Applied Sciences Journal*. Vol. 20, No. 1, PP. 120-129.
- [8] Audu, I. (2004). *The Impact of External Debt on Economic Growth and Public Investment: The Case of Nigeria*. Dakar, Senegal: African Institute for Economic Development and Planning (IEDP).
- [9] Cohen, D., (1993). Low Investment and Large LDC Debt in the 1980s. *Am. Econ. Rev.*, 83(3): 437-449.
- [10] Cohen, D., (1995). Large External Debt and Slow Domestic Growth: A Theoretical Analysis. *J. Econ. Dyn. Control*, pp: 1141-1163.
- [11] Deshpande, A., (1997). The Debt Overhang and the Disincentive to Invest. *J. Dev. Econ.*, 52: 169-187.
- [12] Fosu, A.K., (1996). The Impact of External Debt on Economic Growth in Sub-Saharan African. *J. Econ. Dev.*, 21(1): 93-118.
- [13] Geiger, Linwood.T. (1990). "Debt and Economic Development in Latin America", *The Journal of Developing Areas*, 24: 181-194.
- [14] Gujarati, D.N., (2004). *Basic Econometrics*. 4th Edn., Tata McGraw Hill Publishing Company Limited, New Delhi, India.
- [15] Hameed, A., Hammad, A, and Muhammed, A. C. (2008). "External Debt and its Impact on Economic and Business Growth in Pakistan" *International Research Journal of Finance and Economics*, 20: 132-140.
- [16] Iyoha, M. A. (1996). "External Debt and Economic Growth in Sub-Saharan African Countries: An Econometric Study". Paper presented at AERC workshop, Nairobi.
- [17] Karagol, E. (2002). The Causality Analysis of External Debt Service and GNP: The Case of Turkey, *Central Bank Review*, 2(1), 39-64.
- [18] Mailafia, L., (2010). Financing Infrastructural Development in Nigeria through Government Bonds. *Nigerian Journal of Accounting Research*. Vol.6, No.2, Pp.40-57.
- [19] Malik, S., Hayat, M.K. & Hayat, M.U (2010). External Debt and Economic Growth: Empirical Evidence from Pakistan", *International Research Journal of Finance and Economics*, ISSN 1450-2887, Issue 44, 88-97.
- [20] Mohamed, Mutasim Ahmed Abdelmawla. 2005. "The Impact of External Debts on Economic Growth: An Empirical Assessment of the Sudan: 1978-2001", *Eastern Africa Social Science Research Review* , 21(2): 53-66.

[21]Nawaz, M., Qureshi, M. and Awan, N. W., (2012). Does External Debt Causes Economic Growth: A Case Study of Pakistan. The Romanian Economic Journal. Year XV, No. 43, PP. 131-144.

[22]Ogunmuyiwa, M. S., (2011). Does External Debt Promote Economic Growth in Nigeria. Current Research Journal of Economic Theory. Vol. 3, No.1, PP.29-35.

[23]Shabbir, S., (2009). Does External Debt Affect Economic Growth: Evidence from Developing Countries. Retrieved 03/03/13 from [http://aysps:gsu.edu/ECON\\_MA\\_shabbirs.pdf](http://aysps:gsu.edu/ECON_MA_shabbirs.pdf).

[24]Soludo, C.C. (2003). Debt Poverty and Inequality in Okonjo Iweala, Soludo, and Muntar (Eds), The Debt Trap in Nigeria, Africa World Press NJ, pp. 23-74.

[25]Sulaiman, L. A. and Azeez, B. A., (2012). Effect of External Debt on Economic Growth of Nigeria. Journal of Economics and Sustainable Development. Vol.3, No.8

[26]UNDP (1996). External Debt Retrieved from [en.wikipedia.org/wiki/](http://en.wikipedia.org/wiki/)(access 01/4/2013).

[27]Were, M. (2001). The Impact of External Debt on Economic Growth in Kenya: An Empirical Assessment, UNU-WIDER Research Paper, DP2001/116.