



## External Debts and the Financing of Education in Nigeria from 1988 – 2018: Implication for Effective Educational Management

Ekaette, S.O. Ph.D.; Owan, V. J.; & Agbo, D. I.

Department of Educational Administration and Planning,  
University of Calabar, Calabar.

### Abstract

This study assessed external debts and the financing of education in Nigeria using time series data obtained from World Bank, and CBN Statistical Bulletin covering a period of 31 years from 1988 -2018. The model of the study was derived, while the data collected were analysed using the Ordinary Least Squares. Diagnostic tests such as Augmented Dickey-Fuller (ADF) unit root test, Johansen co-integration, Vector Error Correction (VEC) techniques of estimation, and Granger Causality tests were all performed. Findings revealed a significant long-run relationship between external debts and the financing of education; external debts have a significant effect ( $F=39.07055$ ,  $p<.05$ ) on the financing of education in Nigeria; external debt stock and external debt service payment have no significant effect on the financing of education; real GDP and Exchange rate have a significant effect on the financing of education in Nigeria respectively. Based on these findings, it was concluded that external debt is a big hindrance to the financing of education and consequently, the economic growth of Nigeria. It was recommended amongst others that the government should use borrowed funds from external sources for productive capital projects or development initiatives such as investment in education and the eradication of illiteracy.

**Keywords:** Debts, External Debts, Financing, Sector, Financing Education, Nigeria,

### Introduction

Cruising towards the end of the 21<sup>st</sup> century Nigeria is still grappling with poor growth and underdevelopment, even as the yearnings for sustainable national development keeps looming large. No nation can witness rapid economic development when the productive capacities of individuals are not properly developed. The manpower of any nation can be strengthened towards improved productivity and functionality through the education and literacy of citizens. Offem, Aniah, Agunwa, and Owan (2017) asserted that education is very necessary for sustaining national income and promoting economic growth in any nation. It is a tool through which illiteracy is erased and a basis upon which other sectors of the economy dwells for their survival. When the populaces are highly educated, the problem of unemployment, hunger, poverty, political violence, and other social vices, will be erased (Arop, Owan, & Ekpang, 2018). No economy of the world can witness rapid growth and development when much of her population cannot “read” and “write” (Arop, Ekpang, Nwannunu, & Owan, 2018).

Education constitutes the very foundation of meaningful socio-economic, political growth and development of any nation (Nwachukwu, 2014). It plays a significant and yet dynamic role around which all other development initiatives revolves. Given the economic revolution that is going on through the rapid developments in Information and Communication Technology (ICT), it is obvious that any country that wants to be reckoned with in the global arena must be outstandingly advanced in education (Nwachukwu, 2014; Owan & Agunwa, 2019). This explains why the Federal Government of Nigeria regarded education as an instrument par excellence for affecting national development (Ajeyalemi,

2009). Ubogu (2011) pointed out that the demand for education is so high because it is not only an investment in human capital, it is also a pre-requisite for economic development. It can be inferred from the foregoing that, the importance of education in alleviating illiteracy, equipping skills to citizens, taming unemployment, eliminating social vices amongst several other benefits, cannot be overstated. Education can, therefore, be regarded as the mother sector of all other sectors in a country, since it is through education that other sectors derive the strength of their workforce.

As important as this sector, one issue that has limited the efficacy in the implementation of educational policies in Nigeria is poor funding. While it is commonplace to see sound educational policies being formulated, the poor implementation of such policies has never been unconnected with inadequate funding. Nwachukwu (2014) disclosed that the financing of education is at the heart of the educational crisis in many countries of the world. In Nigeria, there appears to be a perennial crisis of funding and lack of definite structures and strategies in the education sector.

Many schools lack the necessary resources and facilities to operate smoothly towards the realization of aims and objectives. This has also compounded further issues in the quality of products supplied by the formal school system which do not meet societal demands. There is a clear mismatch between societal expectations from the school system and the actual production of the schools, thus, creating gaps, imbalances, and redundant economic growth as a consequence. Eyiche as cited in Nwachukwu (2014) asserted that the manifestation of poor funding of Nigeria's education from the mid-1970s into 2000s caused widespread cases of arrears of unpaid teachers' salaries, shortages in the supply of school facilities and equipment, dilapidated or grossly inadequate buildings.

It follows from the above assertion that the effective management of the education system has become a Herculean task even in the modern day. Such that, when the situation becomes intolerable, either the teachers and/or the students embark on strikes and other forms of demonstrations as means of drawing the government's attention to their plight. The issue of poor financing of education remains unchanged even in recent times and justifies one of the reasons why UNESCO specified that all developing nations allocate at least 26% of their total budget to the education sector. Unfortunately, in the Nigeria context, meeting the UNESCO benchmark is still a mirage as budgetary allocations made are far behind, and are nowhere near the 26% advocated. As a matter of fact, the allocation made to the education sector in the past 10 years is discouraging and unconvincing of any nation with development initiative. A look at the data presented in Table 1 will provide sufficient evidence which justifies the underfunding of education in Nigeria.

**Table 1: Allocation to the education sector as percent of the total budget from 2009-2018.**

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Alloc. to Educ.	7.25%	4.83%	6.16%	8.20%	8.54%	9.94%	7.74%	6.53%	7.39%	7.03%

Source: Odigwe and Owan (2019).

From the data in Table 1, you can see the paltry figures allocated to education which tells you that, in the past 10 years, the highest allocation was made in 2009 with only 9.9% of the nation's budget channeled towards education. Table 1 indicates that, on the average, the allocation to Education for the past 10 years stood at 7.361% which is 3.53 times less than the minimum allocation prescribed. Nwachukwu (2014) also revealed that between

1971 to 2013, Nigeria recorded either negative GDP growth rates or low positive growth rates and that education has been poorly funded over the period. The effect of this underfunding does not only concern the education sector alone, it spans across all other sectors of the economy, and affects also the growth and development prospect of Nigeria.

This study was undertaken because, in each passing year, the Nigerian economy (just like other developing nations) source for funds from internal and external sources to address economic concerns. Given the huge nature of such borrowings, one will expect that such debts be used productively to boost every sector of the nation. Olasode and Babatunde (2016) opined that most third world and developing countries are faced with the scarcity of funds to finance major infrastructure projects in their countries, and usually seek funds from internal and external sources to supplement their revenues from taxes and earnings from other means (which are usually low when compare with other developed nations). As a result of this situation, most developing have the hype of debts which always serve as a barrier to economic growth and welfare in these parts of the world (Olasode & Babatunde, 2016).

Borrowing to offset macroeconomic crises is not a problem in itself, especially when the means to pay are available. It becomes a problem, however, when a nation borrows without the corresponding means to pay. Sometimes debts are difficult for any nation to pay especially in situations where borrowings are not used judiciously for economic advancement, thus, resulting in bad debts. Most development economists are now advocating for "favourable debts" (Olasode & Babatunde, 2016). A Favourable debt is one where the capital acquired has the potentials of high leftover after deducting the cost of the loan (Olasode & Babatunde, 2016). In this situation, the debts will be financing economic growth, increasing the infrastructural capacity and expanding output of the borrowing country (Pattilo, Ricci, & Poirson, 2001).

Debt, therefore, refers to the resources of money in use in an organization which is not contributed by its owners and does not in any other way belong to them (Udoka and Ogege, 2012). Public debt can either be domestic or external debt. Domestic debts are those debts incurred within the country while external debts are those debts incurred outside the shore of the country (Paul, 2017). Udoffia and Akpanah (2016) defined external debt as packages that consist of a combination of financial, technical vis-a-vis managerial requirements emanating from outside the country, aimed at supporting economic growth and development and are repayable at a determined future date in foreign currency. External debt is a major source of public receipts. 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 (Paul, 2017).

One of the major causes of slow economic growth is foreign indebtedness. This is because many countries who are externally indebted struggle to achieve their macroeconomic objective including, economic growth, full employment, high life expectancy, literacy rate, price stability, improved balance of payment, and economic welfare. Onwe (2018) stated that the problem of an increasing rate of the external debt is threatening to the development programs embarked upon by countries, thereby retarding their economic growth and development. One major factor impeding economic growth through funds from external borrowing mainly in Africa is corruption (Onwe, 2018).

As a matter of fact, it is corruption to divert or loot monies borrowed for economic improvement for private gains. It also corruption to unevenly distribute borrowed or available resources across various sectors (favouring some and disfavouring others). It was based on these persisting issues of high borrowings from external sources, coupled with poor



financing of education, as well as the redundant growth level of Nigeria, that prompted the researchers' curiosity to assess the association linking external debts and the financing of education in Nigeria.

### Purpose of the Study

The main purpose of this study is to assess external debts and the financing of education in Nigeria from 1988 -2018. Specifically, this study sought to examine:

1. the long-run relationship between external debts and the financing of education in Nigeria.
2. the causal relationship between external debts and the financing of education in Nigeria.
3. The effect of external debt on the financing of education in Nigeria.

### Research hypotheses

The following null hypotheses were formulated to direct the study.

1. There is no significant long-run relationship between external debts and the financing of education in Nigeria.
2. There is no causal relationship between external debts and the financing of education in Nigeria.
3. External debt has no significant effect on the financing of education in Nigeria.

### Theoretical framework

This study was based on the debt overhang theory by Krugman (1988).

#### *Debt overhang theory by Krugman (1988)*

Debt overhang theory was developed by Krugman in 1988 and is used to describe a situation where the debt of a country exceeds her capacity to offset it in the future. Debts can overhang for several reasons and the effect is on economic growth, employment, and economic stability. The Debt overhang theory is predicated on the assumption that if a country's debt outweighs the repayment capacity with some probability in the future, expected debt service is likely to be an increasing function of the country's output level. Onwe (2018) clarified that when the debt of a country overhangs the returns from investing in the domestic economy are effectively taxed away by existing foreign creditors and investment by the domestic and new foreign investor is discouraged. This decreases the domestic country's ability to grow its economy and raises its dependence on foreign debt (Yucel, 2009).

Krugman (1988) explains debt overhang as one whereby the expected repayment amount of debt exceeds the actual amount at which it was contracted. Borensztein as cited in Utomi (2014) also defined debt overhang as one where the debtor nation benefits very little from the returns on additional investment due to huge debt service obligations. The "debt overhang effect" comes into play when accumulated debt stock discourages investors from investing in the private sector for fear of heavy tax placed on them by the government. This is known as tax disincentive (Utomi, 2014). The tax disincentive here implies that because of the high debt and as such huge debt service payments, it is assumed that any future income accrued to potential investors would be taxed heavily by government so as to reduce the amount of debt service and this scares off the investors thereby leading to disinvestment in the overall economy and as such a fall in the rate of growth (Ayadi and Ayadi, 2008).

The implication of this theory to the present study shows that the debt burden of any country can affect the economic activities including the funding of education of such indebted country. It must be recalled that the debt overhang theory does not disfavour



external borrowings, it only tells us about situations in which debt burden become unbearable and heavy for a country if there are no means for the repayment of borrowed funds. External borrowings can be used to tackle macroeconomic issues if such funds are allocated properly and used honestly for productive purposes. One core area where borrowed funds can be invested in the education sector, to boost the manpower of the state, increase employment level, improve the productive capacities of citizens, and improve the stock of human capital. When all these macroeconomic indices are in place, the productive abilities of individuals imply that more commodities will be produced locally, and a vent of the surplus will be created for domestic consumption and for exports. Thus, importation will be reduced as many of the currently imported commodities will be produced locally. Export commodities will be available as many goods will be traded to foreign nations lacking them, resulting in improvement in the balance of payment position.

### Empirical studies

This section presents some empirical works of literature that are related to this study which can be used to show the techniques, findings, and areas in which earlier studies had focused. Utomi (2014) investigated the impact of external debt on economic growth in Nigeria for the period 1980-2012. The techniques of Estimation employed in the study include the Augmented Dickey-Fuller (ADF) test, Johansen Co-integration, Vector Error Correction Mechanism, and Granger Causality Test. The results showed an insignificant long-run relationship and a bi-directional relationship between external debt and economic growth in Nigeria.

Using a qualitative approach, Rowell and Money (2018) critically examined the past and present situation of financing education in Nigeria, the implications of inadequate funding and possible strategies of funding education. It was revealed that precisely, the federal government spending on education is below 10 percent of its overall budget.

Olasode and Babatunde (2016) used the Autoregressive Distributed Lag (ADL) model to capture the effect of externals debts on the viability and growth of the Nigerian economy from 1984-2012. The econometric tests of stationarity (Unit Root Test) and Co-integration Tests confirm the existence of a long-run relationship between the variables. The result from the ordinary least squares method used confirmed that external debts have positive while external debts of the present year posed a negative effect on the performance of the economy. It was recommended that the government should ensure that debts incurred are channeled towards productive uses.

Paul (2017) analysed the impact of external debt on the economic growth of Nigeria using the ordinary least squares regression, ADF unit root test, Johansen cointegration, and error correction test. Findings reveal that debt service payment has a negative and insignificant impact on Nigeria's economic growth while external debt stock has a positive and significant effect on Nigeria's growth index. The control variables: external reserve and exchange rate have a positive and significant effect on growth. Johansen cointegration test shows a long-run relationship between external debt and growth index (GDP).

Onwe (2018) in an empirical investigation revealed the presence of long-run relationship among the variables. While the Granger causality test showed that there is a bi-directional relationship between external debt and economic growth in Nigeria. The result also revealed that there is a negative relationship between external debt financing and economic growth within the period under review. It was, therefore, recommended that external debt should be contracted solely for capital investment within the domestic



economy as this will get to create vast opportunities for the citizens and improve the national economy positively.

Similarly, Udeh, Ugwu, and Onwuka (2016) discovered that External Debt had a positive relationship with Gross Domestic Product in the short-run, but a negative relationship at long-run. Also, while External Debt Service Payment had a negative relationship with Gross Domestic Product, Exchange Rate had a positive relationship with it. Ebenezer (2014) discovered that external debt burdens have constrained the Nigeria economy promoting poverty, unemployment, inflation, and associated health-related diseases. The study concluded that in as much as corrupt practices tails the political system, and as long as Nigeria economy is largely driven by government expenditure, exploit on loan will be detrimental. Hence, external loans have failed to leverage the political-economic system of Nigeria because of external influence and internal connivance from leaders.

The review presented so far is a clear indication that economist and scholars have really focused on the external debts and the economic development of Nigeria at various time periods. Other scholars have also focused on the financing of education using a qualitative approach. There is no evidence of any study that has associated external debts and the financing of education in Nigeria. Thus, this study contributes to the literature by providing an empirical nexus between external debts and the financing of education using the econometric approach. This study is premised on the assumption that funds borrowed externally can be channeled towards improving the human capital and productive capacities of citizens, and literacy levels of individuals, which will, in turn, boost the economic productivity and consequently, provide better means of debt repayment.

### Methodology

This study adopted an Ex-post facto research design where the phenomena to be studied have already occurred and no further manipulations can be made. The data for this study were collected from secondary sources including Central Bank of Nigeria Statistical Bulletin (2018), and the World Bank (2018). Econometric approaches such as Augmented Dickey-Fuller (ADF) unit root test, Johansen co-integration, Vector Error Correction techniques of estimation, Granger Causality tests, and Ordinary Least Squares regression analysis were used.

### Model Specification

The study is set to examine external debts and the financing of education in Nigeria from 1988 to 2018. The models for this study are adopted from a simple open macroeconomic debt growth model employed by Boboye and Ojo (2012) and Utomi (2014), with modifications a few modifications. The specified model in its functional form is:

$$\text{EXEDU} = f(\text{EDS}, \text{EDSP}, \text{RGDP}, \text{EXR}) \dots \quad i$$

Where:

EXEDU = Expenditure on Education (Proxy for the financing of education)

EDS = External Debt Stock

EDSP = External Debt Service Payments

EXR = Official Exchange Rate.

The stochastic (explicit) form of the model in equation (i) is expressed as:

$$\text{EXEDU} = \beta_0 + \beta_1 \text{EDS} + \beta_2 \text{DSP} + \beta_3 \text{RGDP} + \beta_4 \text{EXR} + \mu \dots \quad ii$$

Where:

$\mu$  = Error term

Where:  $\beta_0$  = intercept of relationship in the model



$\beta_1 - \beta_3$  = Coefficients of each variable in the model

$\mu$  = the error term.

By log linearising, equation (ii), the model will take the form:

$$\text{Log(EXEDU)} = \beta_0 + \beta_1 \text{Log(EDS)} + \beta_2 \text{Log(DSP)} + \beta_3 \text{Log(RGDP)} + \beta_4 \text{Log(EXR)} + \mu \quad \dots \dots \dots \text{iii}$$

Where:

Log = Natural log from equation (ii).

Thus, equation (iii) represent the time series forms of the models.

### *Estimation techniques*

The data collected from 1988 – 2018 (31 years period) will be estimated using Augmented Dickey-Fuller Test (Unit Root) to determine whether the variables are stationary or not; Johansen co-integration technique to check for a long-run relationship among the variables in the model. Vector Error Correction Model was used to show the speed of adjustment from short-run to long-run equilibrium. Granger causality test is used to check for causal relationships between two variables. Ordinary Least Squares was used to show the composite and relative effect of the independent variables on the dependent variable. All computations and estimations were aided using E-views v9 econometrics software at 0.05 level of significance. The results of the analysis are presented in the following section.

### **Results presentation**

The results from the analysis of data are presented and interpreted. All the null hypotheses formulated earlier were also tested in this section as shown below.

#### Unit Root Test

This test is relevant in examining the properties of variables to check for the presence of a unit root in a given set of time series data. It used to determine whether variables are stationary or not. It enables a data analyst to manipulate non-stationary data into stationary data at first difference and in severe cases, second difference. In this study, the Augmented Dickey-Fuller (ADF) test was performed to check for stationarity and the results are presented in Table 2.

**Table 2: Stationarity test using the Augmented Dickey-Fuller Approach.**

Variables	ADF	Levels		ADF	First Differences		order	Remarks
		Critical Values 5%	Critical Values 10%		Critical Values 5%	Critical Values 10%		
EXPEDU	-1.2571	-2.9639	-2.6210	-5.6016	-2.9677	-2.6229	I(1)	S
EDS	-2.1534	-2.9639	-2.6210	-3.7095	-2.9677	-2.6229	I(1)	S
EDSP	-3.8453	-2.9639	-2.6210	-6.0608	-2.9677	-2.6229	I(0)	S
RGDP	-3.9814	-2.9763	-2.6274	-1.0103	-2.9862	-2.6326	I(0)	S
EXR	-1.1198	-2.9639	-2.6210	-3.8814	-2.9677	-2.6229	I(1)	S

Source: Researchers' computation from EVIEWS 9

The a priori expectation for the ADF test is that a variable is considered stationary if its calculated ADF statistics is greater than the prevailing critical value at 5%. Going by this rule, only External Debt Service Payment (EDSP), and Real Gross Domestic Product (RGDP) were stationary at levels. The other three variables Expenditure on Education (EXPEDU), External Debt Stock (EDS), and Exchange Rate (EXR) became stationary after first difference. Thus, EDSP and RGDP were integrated of order zero, while EXPEDU,

EDS, and EXR were integrated of order one. Given this evidence, the data were considered fit for analytical purposes.

**Null Hypothesis 1:** There is no significant long-run relationship between external debts and the financing of education in Nigeria. This hypothesis was tested at .05 level of significance using the Johansen test of co-integration. The co-integration test is used to check for a long-run relationship between the dependent and independent variables (Ogundipe and Amaghionyeodiwe, 2013). The a priori is that there is co-integration if the computed Trace statistics or Eigenvalues are greater than one, or if the p-values are less than 0.05 alpha level. The result of the Johansen co-integration test is presented in Table 3.

**Table 3: Test for Johansen Co-integration Using Max-Eigen Value**

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.7188	36.7968	33.8769	0.0218
At most 1	0.4463	17.1449	27.5843	0.5675
At most 2	0.3539	12.6674	21.1316	0.4833
At most 3	0.2734	9.2613	14.2646	0.2651
At most 4	0.0544	1.6227	3.8415	0.2027

Max-eigenvalue test indicates 1 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: Researchers' computations from EViews 9

It can be seen from the results presented in Table 3 that the Max-Eigen values at 5%, indicates that there is one co-integrating equation. With this evidence the null hypothesis which states that there is no co-integrating equation is rejected. Implying that there is a significant long-run relationship between external debts and the financing of education. We, therefore, estimate the Error Correction Model to determine the short-run dynamics of the model.

**Table 4: Error Correction Estimates Using Vector Error Correction Model (VECM)**

Error Correction:	EXPEDU	EDS	EDSP	RGDP	EXR
CointEq1	-0.997129 (0.43287) [-2.30353]	-0.192295 (0.02745) [-7.00546]	-0.003612 (0.01787) [-0.20209]	-0.544644 (0.46688) [-1.16655]	-1.10E-10 (1.4E-10) [-0.77365]

Source: Researchers' computation from EViews 9

The results in Table 4 presents the Vector Error Correction Model (VECM) estimates with the standard errors and t-statistics in parentheses ( ) and [ ] respectively. The a priori for the VECM is that it must be negative. Thus, the results in Table 4 has met the assumption indicating that 99.71% of the errors are corrected in the long-run while allowing for short-run adjustment dynamics.

**Null Hypothesis 2:** There is no causal relationship between external debts and the financing of education in Nigeria.

This hypothesis was tested using the Granger Causality test at .05 level of significance. The a priori is that a variable will be considered as having a cause on the other if the p-value of



its F-statistics is less than .05 otherwise, there is no cause. The result of the Granger causality test is presented in Table 5.

**Table 5: Granger Causality Test.**

Null Hypothesis:	Obs	F-Statistic	Prob.
EDS does not Granger Cause EXPEDU	27	1.55939	0.2279
EXPEDU does not Granger Cause EDS		10.0331	0.0002
EDSP does not Granger Cause EXPEDU	27	0.17284	0.9495
EXPEDU does not Granger Cause EDSP		0.27101	0.8928
RGDP does not Granger Cause EXPEDU	27	3.11011	0.0413
EXPEDU does not Granger Cause RGDP		1.74797	0.1835
EXR does not Granger Cause EXPEDU	27	0.80694	0.5368
EXPEDU does not Granger Cause EXR		3.06558	0.0433

Source: Researchers' computation from EViews 9

The results of the Granger causality test relating to the financing of education were presented. As presented in Table 6, the results indicate that external debt stock does not Granger Cause the financing of education ( $F=1.55939$ ,  $p>.05$ ); external debt service payment does not Granger Cause the financing of education ( $F=0.17284$ ,  $P>.05$ ); the financing of education does not Granger cause external debt service payment ( $F=0.27101$ ,  $P>.05$ ); the financing of education does not Granger cause real gross domestic product ( $F=1.74797$ ,  $p>.05$ ), and the exchange rate does not Granger Cause the financing of education ( $F= 0.80694$ ,  $p>.05$ ). Therefore, all these null hypotheses were retained because the p-values of their respective F-statistics were higher than 0.05 level of significance.

On the other hand, the results also indicated that the financing of education Granger Causes external debt stock ( $F= 10.0331$ ,  $p<.05$ ); real gross domestic product Granger Causes Expenditure on education ( $F= 3.1101$ ,  $p<.05$ ); and the financing of education Granger Causes exchange rate ( $F=3.80694$ ,  $p<.05$ ). Therefore, all the null hypothesis in this regard were rejected and their corresponding alternative hypotheses were retained, because the p-values of their F-statistics respectively, were less than .05 level of significance.

**Null Hypothesis 3:** External debt has no significant effect on the financing of education in Nigeria.

This null hypothesis was tested at 0.05 level of significance using ordinary least squares technique of regression and the result from the analysis is presented in Table 6 below.

**TABLE 6: Ordinary Least Squares regression results summary showing the effect of external debts on the financing of education in Nigeria from 1988-2018.**

Dependent Variable: EXPEDU

Method: Least Squares

Date: 05/13/19 Time: 06:59

Sample: 1988 2018

Included observations: 31

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.42E+10	5.99E+10	-0.237606	0.8140
EDS	-1.058111	1.758130	-0.601839	0.5525
EDSP	-10.74939	7.849730	-1.369396	0.1826
RGDP	0.346169	0.102336	3.382661	0.0023
EXR	1.48E+09	2.09E+08	7.095817	0.0000
R-squared	0.857364	Mean dependent var	1.61E+11	



Adjusted R-squared	0.835420	S.D. dependent var	1.89E+11
F-statistic	39.07055	Durbin-Watson stat	2.058929
Prob(F-statistic)	0.000000		

Source: Researchers' computation from EViews 9

The results presented in Table 6 indicates that the constant term has a coefficient of -1.42E+10 which disclose that when all the independent variables are kept constant, the financing of education will be -1.42E+10. The estimate for EDS is negative (-1.058111) which indicates an inverse relationship between external debt stock and the financing of education. This implies that a unit increase in external debt stock will result in a 1.058111 decrease in the financing of education. The coefficient of EDSP is also negative (-10.74939) indicating an inverse relationship between external debt service payment and the financing of education in Nigeria. This implies that a unit increase in external debt service payment will decrease the financing of education by 10.74939 units. RGDP has a positive relationship (0.346169) with the financing of education such that a unit increase in real gross domestic product, increases the financing of education by 34.62%. The exchange rate has a positive relationship (1.48E+09) with the financing of education, implying that a unit increase in exchange will increase the financing of education by 1.48E+09 units.

The results in Table 6 also disclosed that the p-value of the F-statistic which is 0.000000 is less than 0.05 level of significance. With this result, there is still sufficient statistical evidence to reject the null and retain the alternative hypothesis. This implies that external debts have a significant influence ( $F=39.07055$ ,  $p<.05$ ) on the financing of education in Nigeria. Relatively, the results showed that external debt stock ( $t= -0.601839$ ,  $p>.05$ ) and external debt service payment ( $t= -1.369396$ ,  $p>.05$ ) have no significant effect on the financing of education. However Real GDP ( $t=3.382661$ ,  $p<.05$ ) and Exchange rate ( $t=7.095817$ ,  $p<.05$ ) significantly affect the financing of education in Nigeria.

The Durbin-Watson value of 2.058929 indicates a negative autocorrelation between the variables. However, the Adjusted R square of 0.835420 indicates a good model fit, and suggest that all the independent variables in the model could be held accountable for 83.5% of the variation in the financing of education in Nigeria. By implication, the remaining 16.5% of the variance is explained by other independent variables not included in the model.

## Discussion of Findings

This study established that there is a significant long-run relationship between external debts and the financing of education. This result disagrees with the results of Utomi (2014), Udeh, Ugwu, and Onwuka (2016) which showed an insignificant long-run relationship between external debt and economic growth in Nigeria. The result agrees however with Olasode and Babatunde (2016), Paul (2017), and Onwe (2018) which all disclosed from Johansen cointegration test that there is a long-run relationship between external debt and growth index (GDP). Although these studies had focused majorly on economic growth as the dependent variable, the focus of this study is on the financing of education. However, the quality of education offered in a country could be used as an index to judge the growth level of that country. The quality of education is also determined by the amount of investment made to it. Thus, there is an associative relationship between the financing of education, quality of education, and economic growth; making all these studies on economic growth relevant to the present study.

The second major finding of this study showed that external debts have no causality effect on the financing of education. This does not support the finding of Onwe (2018) which revealed that there is bi-directional causation between external debt and GDP. The finding of this study does not challenge the position previous findings holding contrary

positions since GDP is not directly the same thing as the financing of education. However, the result of this study suggests that it is not the debt owed by Nigeria that has caused the financing of education to be poor. Despite the debts, Nigeria has several other channels to raise funds and finance the education sector. In most cases where funds are available, there are syphoned, misappropriated, with little or no priority given to education, with the paltry budgetary figures allocated to education showing evidence. Rowell and Money (2018) revealed precisely that, the federal government spending on education is below 10 percent of its overall budget. It follows ab initio that, plans to finance education are not made usually made with sincerity and equity. The education is often overlooked, and corruption on the part of leaders has been the mainstay of the economy that is responsible for fund diversification. Ebenezer (2014) concluded that in as much as corrupt practices tails the political system, and as long as Nigeria economy is largely driven by government expenditure, exploit on loan will be detrimental. Hence, external loans have failed to leverage the political-economic system of Nigeria because of external influence and internal connivance from leaders (Ebenezer, 2014)

The third major finding of this study disclosed that external debts have a significant influence on the financing of education in Nigeria. External debt stock and external debt service payment are negative and non-significant in predicting the financing of education in Nigeria. While Real GDP and Exchange rate are positive and significant in predicting the financing of education in Nigeria. This finding corroborates the finding of Paul (2017) which revealed also that debt service payment has a negative and insignificant impact on Nigeria's economic growth. Onwe (2018) also showed there is a negative relationship between external debt financing and economic growth. Udeh, Ugwu, and Onwuka (2016) revealed that external debt service payment had a negative relationship with the gross domestic product, the exchange rate has a positive relationship with it. The findings of this section are very glaring because external debt stocks and external debt service payment are all channels of capital outflows from Nigeria paid in the form of goods, currency, or services. Therefore, such outflows will have been channeled into productive capital projects that will benefit the country in the short- and long-run if there were no external debts.

It will be recalled that exchange rate and real gross domestic product were reported in this study to be positive and significant in predicting the financing of education in Nigeria. A high exchange rate means the Nigerian Naira becomes very powerful vis-à-vis other currencies. Thus, it can be used to reduce the cost of importation of foreign goods, and in the foreign exchange market. The reduced cost of importation can aid the supply of modern educational equipment from advanced countries to Nigeria, more currencies will be domestically available to pay teachers' salaries, build new structures, and provide scholarships to outstanding students and many other such benefits.

Also, one should not also wonder why an increase in GDP will promote an increase in the financing of education. Ceteris paribus, an increase in GDP means that Nigeria is increasing the amount of production taking place in the economy. With this, export commodities and consumer goods will be available making it easy for even the poor to feed, the balance of payment will improve, the citizens have a higher income, and hence are spending more, there will be an increase in the lifestyle of the citizens, and more individuals will be attending schools. The government, on the other hand, will be enjoying surpluses in terms of the balance of payment, and with the high exchange rate in place, Nigeria-produced goods will be expensive to other nations while Nigeria enjoys buying goods at a cheaper rate from other countries with lower purchasing power parities.

## Conclusion

It was concluded generally that external debt is a big hindrance to the financing of education and consequently, the economic growth of Nigeria. External debt has a significant long-run relationship with the financing of education. External debt stock as well as external debt service payment are negatively and non-significantly related to the financing of education in Nigeria. Thus, the more Nigeria keeps spending to service debts, the less will fund be available to finance education, other sectors, and promote economic development.

## Recommendations

The following recommendations were based on the findings of this study for effective educational management in Nigeria.

1. The government should use borrowed funds from external sources for productive capital development project or programmes such as investment in education and eradication of illiteracy.
2. The productive capacity of individuals in the country should be improved through quality education, training, and support in order to boost the GDP of the country, reduce external borrowing, and implement fully, the development initiatives of the State.
3. Nigerian leaders should make concerted effort to channel even beyond the UNESCO 26% benchmark specified as allocation to the education sector, with the consciousness that adequate financing of the education sector, is the adequate funding of all other sectors.

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## APPENDIX

Data on Allocation to Education, External Debt Stock, and External Debt Service Payments in dollars and Exchange Rate (Naira to a dollar), and GDP

Year	EXPEDU	EDS (\$)	EDSP (\$)	EXR	R GDP(\$)
1988	584130070	29624118543	2210430889	4.536966667	49,648,470,439.80
1989	1067179030	30121991493	2117492335	7.364735	44,003,061,108.34
1990	1126664140	33458483418	3335551234	8.038285	54,035,795,388.09



1991	419906180	33526931287	2944761131	9.909491667	49,118,433,047.63
1992	2008340430	29018663728	2414572769	17.298425	47,794,925,815.58
1993	6436080750	30699263746	1490998007	22.0654	27,752,204,320.20
1994	7878084920	33092276818	1871673346	21.996	33,833,042,988.44
1995	12728676390	34094439060	1832902394	21.89525833	44,062,465,800.03
1996	12135951790	31414754639	2228632518	21.884425	51,075,815,092.31
1997	16440162819	28467535604	1415894564	21.88605	54,457,835,193.94
1998	26721320906	30313714708	1331987636	21.886	54,604,050,167.90
1999	27712000000	29095550937	1072056304	92.3381	59,372,613,485.91
2000	56668169766	32374088077	1854815173	101.6973333	69,448,756,932.60
2001	62567055443	31418239764	2524310176	111.23125	74,030,364,472.44
2002	73435499300	31780094348	1476875903	120.5781583	95,385,819,320.72
2003	139000000000	36711571871	1631346323	129.22235	104,911,947,833.93
2004	937700000000	39898090686	1710306187	132.888025	136,385,979,322.69
2005	920000000000	25754639315	8807112718	131.2743333	176,134,087,150.54
2006	920000000000	9617377579	6710132519	128.6516667	236,103,982,431.64
2007	1.86E+11	12144518677	1010500551	125.8081083	275,625,684,968.91
2008	1.6398E+11	13128901893	686065465.7	118.5460167	337,035,512,676.56
2009	2.21019E+11	15942067576	757174385.3	148.9017417	291,880,204,327.63
2010	2.49009E+11	15484219062	1256894894	150.298025	363,359,886,203.26
2011	3.06003E+11	17663306192	525161711.7	153.8616083	410,334,579,160.59
2012	4.00015E+11	18127298622	1337213046	157.4994258	459,376,049,763.82
2013	4.26053E+11	21143710109	495656554.4	157.311225	514,966,287,334.44
2014	4.93E+11	24755952586	4546142337	158.5526417	568,498,937,615.59
2015	3.92002E+11	28942969916	1463887248	192.4403333	494,583,180,777.23
2016	3.96006E+11	31151474940	2502821568	253.492	404,649,527,537.71
2017	5.5E+11	40238485334	3572716018	305.7901092	375,745,486,520.66
2018	6.05008E+11	9263570000	23985772.9	305.74525	70,546,390.87