Analysing External Debt Impact on Human Capital Development in Nigeria

Mbanefo Patrick Amaechi
Department of Banking & Finance, NnamdiAzikiwe University, Awka
Email: pa.mbanefo@unizik.edu.ng
Phone:+2348184011730

DOI: 10.56201/ijefm.v8.no1.2023.pg70.86

Abstract
Underdeveloped economies like Nigeria have always battled with human capital and economic development challenges orchestrated by poor and insufficient capital to embark on investment purposes. We know that economists have always supported that investment for production trigger economic activities leading to massive developments. This desire for economic developments have over the years triggered persistent scramble for foreign or international capital by underdeveloped economies and this has remained very contemporary. It therefore becomes imperative to analyse the impact that international capital has on human capital development of underdeveloped economies like Nigeria, with emphasis on External debt which is noted to be the commonest form and most favoured form of international capital for underdeveloped economies. Various studies that attempted to analyse the nexus came up with conflicting and or mixed findings. This study aims at disaggregating the impact of external debt on human capital development. The researcher has proxied ED with External debt stock (EDSK), External debt servicing (EDS), Exchange rate (EXR), Interest rate (ITR) and Inflation rate (IFR). The main objective of this study is to analyse the effect ED on human capital development (HCD) in Nigeria. The specific objectives are to explore, determine, assess, examine and ascertain the effect of EDSK, EDS, EXR, ITR and IFR on HCD. The study adopted ex-post facto research design and sourced data from the Central Bank of Nigeria Statistical Bulletin and Annual Reports and the World Bank Development Indicators were analyzed using Descriptive Statistics, Augmented Dicker Fuller tests for unit roots and Autoregressive Distributive Lag (ARDL) for the hypothesis. The study found no long run effect of ED on HCD in Nigeria but the existence of a positive and significant short run effect on HCD in Nigeria. It is recommended that External debt should be contracted solely for short term investments with economic reasons. Additionally, the Debt Management Office (DMO) must ensure that external debts are not corruptly appropriated.

Keywords: *External Debt Stock, External Debt Servicing, Debt Overhang, Debt Management Office, Human Capital Development, Economic Growth, Economic Development*

Introduction

External Debt (ED) is a variant of international or foreign capital inflow and refers the totality of subsisting capital a country obtains from foreign countries as loans. Debt is a loan contract, and the holder or debtor is obliged to repay along with accruing interest. External Debt is the totality of subsisting capital a country obtains from foreign countries as loans. Nigeria's external debt stock as at 30th, 2022 September stood at USD39.66billion according to the Debt Management Office while external debt servicing for 9 months to September 30, 2022 stood at N0.89 trillion. Debt is derived from Latin word "Debere" meaning to owe. External debt is a foreign currency legal instrument held by foreign investors (Gelpem, A. (2006). Countries borrow as a result of their inability to generate enough domestic savings to carry out productive activities. Such external borrowings by countries are meant to supplement domestic savings and allow such countries to carry out productive activities (Ezeabasili, 2006). A country can also borrow, in the short-term, from external sources to finance current account deficits arising from external disturbances in order to shore up its external reserves position and strengthen her external liquidity position in the future.

External borrowing can be contracted from multilateral agencies, through bilateral agreements and private commercial sources. The reason for opting for external finance as a means of ensuring sustained development rather than utilizing only domestic resources is predicated on the *Dual Gap Theory*. The theory postulates that investment is a function of savings, and that in developing countries; the level of domestic savings is not sufficient to fund the needed investment to ensure economic development. Thus, it is logical to seek the use of complementary external goods and services **(**Tajudeen, 2012).

Nigeria is one of the largest receivers of all forms of international capital. However, Nigeria like most developing economies have been bedevilled by the twin economic crises of mounting debt burden and foreign investment inadequacies occasioned by corruption, misappropriation and poor articulation of projects as well as more than proportionate foreign direct investment income remittance (Ezirim, Anoruo & Muoghalu, 2006).

Literature Review

External Debt Stock is the totality of subsisting capital or loan that a country obtains by way of loan from foreign countries. This also includes the accrued interest on such loans. Debt is derived from Latin word "Debere" meaning to owe. Debt has been conceptualized as resources of money used in an organisation which is not contributed by its owners and does not in any other way belong to the shareholders (Anyanwu J. C: Imimole, Imoughele & Okhuese, 2014)

External Debt Servicing refers to the amount used to repay matured principal portion of a country's external debt stock and the interest due on it. Interest payment and principal repayment constitute a drain in the resources of the borrowing country and the higher the debt stock, the more severe the impact of debt servicing obligations which create a burden on the nation's resources.

External debt burden is the reflection of the difficulties and strains arising from the servicing of external debt. This may result from inability to generate enough resources to meet commitments in debt servicing. The burden is measured in terms of the proportion of current resources (income) devoted to financing past consumption (Ogunlana, 2005). Therefore, when a disproportionately large share of current resources is deployed to service external debt, the burden increases and conversely, when external debts can be serviced without compromising the requirements of domestic economic development.

Debt Overhang refers to a situation where the debt burden of a borrower becomes so heavy that the borrower cannot practically contract further debts to finance its investment projects.

External Debt Management refers to the establishment of the conditions of issue and redemption of foreign loans. It involves the process of administering the external public debt. It involves a conscious and carefully planned schedule of the acquisition, deployment and retirement of loans contracted either for developmental purpose or to support the balance of payments.

Human capital refers to the abilities and skills of human resources of a country, while human capital development refers to the process of acquiring and increasing the number of persons who have the skills, education and experience that are critical for economic growth and development of a country's economy (God'stime & Uchechi, 2014).

According to Harbison and Myers (1964), human capital development can be seen as the deliberate and continuous process of acquiring requisite knowledge, skills and experiences that are applied to produce economic value for driving sustainable national development.

Economic growth is defined by Antwi, Mills, and Zhao, (2013) as the process that brings about increase in the real per capita income of a country over a long period of time. Furthermore, Barro, and Martin, (1992), defined economic growth as a steady process by which the productive capacity of the economy is increased over time to bring about rising levels of national output and income.

Economic development is one of the most frequently used concepts in the world. It refers to the process by which the economic well being and quality of life is improved. Economic development seeks to achieve long-term sustainable development in a nation's standard of living, an increase in the per capita income of every citizen, adjusted for purchasing power parity (Porter, 1998).

Conceptual Framework

Theoretical Framework

The Debt Overhang Theory is based on the premise that if debt will exceed the country's repayment ability with some probability in the future, expected debt servicing is likely to be an increasing function of the country's output level. Thus some of the returns from investments in the domestic economy are effectively 'taxed' away by existing foreign creditors, and investment by domestic and new foreign investors is discouraged (Claessens, 1996). Under such circumstances, the debtor country shares only partially in any increase in output and exports because a fraction of that increase will be used to service the external debt. The theory implies that debt reduction will lead to increased investment and repayment capacity and, as a result, the portion of the debt outstanding becomes more likely to be repaid. When this effect is strong, the debtor is said to be on the 'wrong side' of the debt Laffer curve. The debt Laffer curve refers to the relationship between the amount of debt servicing and the size of debt. However, the idea of debt Laffer curve also implies that there is a limit at which debt accumulation stimulates development (Elbadawi, Ndudu & Ndung'u, 1996).

In reference to debt Laffer curve, Lensink and White (1999) argue that there is a threshold at which more debt is detrimental to development. The liquidity constraint is captured as a 'crowding out' effect, by which the requirement to service debt reduces funds available for investment and development. A reduction in the current debt service should, therefore, lead to an increase in current investment for any given level of future indebtedness (Cohen, 1993). Other channels through which the need to service a large amount of external obligations can affect economic performance include lack of access to international financial markets and the effects of the stock of debt on the general level of uncertainty in the economy (Claessens, 1996).

Three reasons could be advanced why debt may be preferred to taxation or money printing. Firstly, debt encourages a more equitable manner in which a country can exploit investment with long gestation periods. Secondly, debt creates a readily available vehicle for conducting counter-cyclical policies or meeting emergency spending needs. Adjusting taxes frequently may lead to efficiency losses and economic uncertainty. Third is the stability advantage of debt over taxation and seignior age. However, debt has to be repaid. Funds borrowed are simply postponed taxation. Hence, the use to which the funds are put and the returns relative to the cost of borrowing becomes crucial. If the government invests in infrastructure, such investments are capable of leading to faster growth and socio-economic development (Were, 2001; Soludo, 2003).

The scope of debt overhang is much wider in that the effects of debt do not only affect investment in physical capital but any activity that involves incurring costs up-front for the sake of increased output in the future. Such activities include investment in human capital (in terms of education and health) and in technology acquisition whose effects on development may be even stronger over time. The measure for debt overhang is the ratio of external debt stock to per capita income measures the extent to which total domestic output can be deployed to wipe out outstanding external debt obligations. A high or increasing ratio will indicate problems of

external debt management. Moreover, debt service to per capita income is used to explain debt crowding out effect and indicate the proportion of income that are committed to service of debt incurred in the past. In particular, debt service / per capita income are a liquidity measure. The debtor's ability to meet debt servicing obligation declines as the ratio increases. This directly shows that the debt is likely to be unsustainable. This situation can be costly as it can require greater adjustment to compensate for adverse human capita developments.

Empirical Review

Various literatures were reviewed by the researcher to analyze the effect of foreign direct investment on human capital development in Nigeria in order to establish their nexus. The acquisition of external funds, however, depends on the relationship between domestic savings, foreign funds, investment, and economic growth. A guiding principle on when to borrow is a simple one. Borrow abroad so far as the fund acquired generates a rate of return that is higher than the cost of borrowing the foreign funds (Ajayi & Khan, 2000). In essence, by following this guiding principle, a borrowing country is increasing capacity and expanding output with the aid of foreign savings.

Gana (2002) posits that foreign borrowing is desirable and necessary to accelerate economic growth, provided they are channeled to increase the productive capacity of the economy and promote economic growth and development. Three reasons could be advanced why debt may be preferred to taxation or money printing. Firstly, debt encourages tilting by allowing a more equitable manner in which a country can exploit investment with long gestation periods. Secondly, it paves way for a more efficient procedure for conducting counter-cyclical policies or meeting emergency spending needs. Adjusting taxes frequently may lead to efficiency losses and economic uncertainty. Third is the stability advantage of debt over taxation and seignorage (Ijeoma, 2013). However, debt has to be repaid. Funds borrowed are simply postponed taxation. Hence, the use to which the funds are put and the returns relative to the cost of borrowing becomes crucial. If the government invests in infrastructure, such investments are capable of leading to faster growth and socio-economic development (Ogunmuyiwa, 2015).

Tokunbo, Risikat and Oladele (2010) assert that the necessity for governments to borrow in order to finance deficit budgets has led to the development of external debt in Nigeria. The study examined how the use of budget deficits as an instrument of stabilization leads to the accumulation of external debt with the attendant effects on the growth of Nigeria's economy between 1970 and 2003. The finding confirmed the existence of the Debt Laffer Curve and the nonlinear effects of external debt on growth. The study concluded that if debt-financed budget deficits are operated in order to stabilize the debt ratio at the optimum sustainable level, debt overhang problems would be avoided and the benefits of external borrowing would be maximized. Events in the past few years have led to increasing concerns about the possible adverse consequences of the substantial accumulation of debt by Sub-Saharan African countries. The experiences of countries like Mexico and Argentina, with debt overhang in the early 1980s have heightened this fear. Fears are often expressed that excessive external debt burdens will threaten financial stability with adverse consequences for the real economy, or that increases in debt will create political pressures that will make acceleration of inflation inevitable (Summers,

1986). The view persists however, that the build-up to debt, particularly in the developing economies, could imperil the stability of the financial system, according to some analysts. They argue that heavy debt burdens have reduced the ability of financial institutions, borrowers and the economy at large to withstand recessions and other types of socio-economic adversity.

External debt does not automatically transform into debt burden when funds are optimally utilized. In an optimal condition, the marginal return on investment is greater than or equal to the cost of borrowing. Huge debt of less developed countries has constituted a major obstacle to economic growth of these countries. This has resulted to debt restructuring of various kinds. Debt restructuring is the renegotiation of existing debt to new terms that are accepted by both the creditor and debtor. Restructured debt can be in three ways: rescheduling of debt, debt relief and conversion of debt, (Ekperiware &. Oladeji, 2012). Rescheduled debt is a change in the terms of agreement and conditions surrounding the amount of debt owed. Debt relief or cancellation is the outright reduction in outstanding debt obligation. However, external debt relief contributing to economic growth is possible if such countries are able to engage in viable economic projects with their new external debt status without falling back to debt crisis (Ekperiware &. Oladeji, 2012).

Ezeabasili, Isu and Mojekwu (2011) in their study, investigated the relationship between Nigeria's external debt and economic growth, between 1975 and 2006 using Johansen co-integration approach, error correction method and granger causality test. The result of error correction estimates revealed that external debt had negative relationship with economic growth in Nigeria.

Egungwu (2018) evaluated the impact of external debt on human capital development in Nigeria using ex post facto research design and time series spanning 30 years (1986-2015). He used the Ordinary Least Square (OLS) regression technique to test the hypothesis. The study found that both external debt stock and external debt servicing had a significant negative effect on human capital development.

Yesuf (2014) studied the impact of the huge external debt from London Club, with its servicing requirements on human capital development in Nigeria. The Neoclassical growth model which incorporates external debt from London Club, debt indicators, and some macroeconomic variables was employed and analyzed using both Ordinary Least Square (OLS) and Generalized Least Square (GLS) methods. Their finding revealed negative impact of external debt from London Club and its servicing requirement on human capital development in Nigeria.

Igudia (2021) studied the impact of external debt servicing on human capital development in Nigeria and found an inverse relationship between external debt servicing and human capital development while there is a significant positive impact of external debt stock on human capital development

Sulaiman and Azeez (2012) evaluated the effect of external debt from London Club and its servicing on human capital development in Nigeria. Ordinary Least Squares (OLS), Augmented Dickey-Fuller (ADF) Unit Root test, Johansen Co-integration test and Error Correction Method (ECM) were employed in the analysis. The findings from the error correction

method showed that external debt from London Club had contributed positively to human capital development in Nigeria.

Imimole, Imoughele and Okhuese (2014) examined the extent to which Nigeria's external debt from London Club related to indices of ability to pay in order to ascertain the sustainability of it and to identify the main determinants of her external indebtedness for the period 1986 to 2010. The study observed that Nigeria's external debt from London Club was not sustainable in terms of willingness and ability to pay, and that the country's external debt was characterized by capital flight as a result of external debt accumulation which is evident in the ratio of the country's reserves to external debt.

Atueyi (2019) carries out a study on external debt and human capital development in Nigeria. He found that external debt, debt servicing and gross capital formation have negative and significant effect, negative insignificant effect and positive insignificant effect respectively on human capital development in Nigeria

1

Ibi and Aganyi (2015) analyzed the impact of external debt from multilateral agencies on economic development in Nigeria. Based on the two-stage data processing, the result revealed that causation between external debt from multilateral agencies and economic development is weak in the Nigerian context and external debt from multilateral agencies could thus not be used to forecast improvement or slowdown in economic development in Nigeria.

Kasidi and Said (2013) investigated the impact of external debt from London Club on human capital development in Tanzania for the period of 1990-2010. The study used time series data on external debt from London Club and human capital development in Nigeria. It was assumed that external debt helped developing countries to meet developing needs, while debt servicing seeks development by restoring credibility to existing and new creditors. The study revealed that there is significant impact of the external debt from London Club and debt service on human capital development in Nigeria.

Obademi (2012) focused on the impact of public debt from multilateral agencies on human capital development in Nigeria. The result showed that the joint impact of debt on human capital development in Nigeria was negative and quite significant in the long run though in the short-run the impact of borrowed funds and coefficient of budget deficit was positive.

Ajayi and Oke (2012) investigated the effect of the external debt burden and servicing on economic development of Nigeria .They adopted the Ordinary Least Square (OLS) regression technique on secondary data and on variable like National Income, Debt Service Payment, External Reserves, Interest rate among others. The finding indicated that external debt burden had an adverse effect on the nation's income, per capita income of the nation and high level of external debt led to devaluation of the nation's currency, increase in retrenchment of workers, continuous industrial strike and poor educational system and this led to the economy of Nigeria getting depressed.

Model Dimension

The study adopted the ex-post facto research design. The Secondary data used in this study were sourced from the archives of the World Bank Development Indicators and the Central Bank of Nigeria (CBN), Statistical Bulletin from 1987 to 2018.

The model used for this investigation will be the adaptation and modification of the work of Egungwu (2018), who assessed the effect of external debt on human capital development in Nigeria and found significant negative effect. The model is stated thus:

HDI = f (EXTD, EXR, INFR)

The model is modified as follows:

HDI= f (EXDSK, EXDS, EXR, ITR, IFR)

The econometric equation for the modified model is:

$HDI = b_0 + b_1 EXDSK + b_2 EXDS + b_3 EXR + b_4 ITR + b_5 IFR + Ut$ --- - - -- Eqn (5)

Where:

HDI= Human capital development index
EXDSK= External Debt Stock
EXDS= External Debt Servicing
EXR= Exchange Rate
ITR= Interest Rate
IFR= Inflation Rate
b0 = Intercept of relationship in the model constant
b1- b5 = The coefficients of the explanatory variables
Ut = Stochastic disturbance (Error term)

A priori Expectation

The theoretical expectation of the study is that foreign direct investment will have positive effect on human capital development. The relationship is $\beta_1 > \beta_2 > \beta_3 > \beta_4 > \beta_5 > 0 < \beta_6$

Methods of Analysis

The data was analyzed with econometric techniques using descriptive statistics, diagnostic test using Augmented Dickey Fuller test and the Auto Regressive Distributive Lag (ARDL test) (Bounds test). Descriptive statistics was used to describe the basic features of the data in the study as they provide simple summaries of samples and their measures. Augmented Dickey fuller test was applied to carryout diagnostic test for unit roots and the ARDL was used in testing the short run and long run relationships between the dependent and the independent variables.

Results and Discussion of Findings

Descriptive Statistics of variables of the study

	HDI	EXDSK	EXR	EXDS	IFR	EXR	ITR
Mean	0.453000	71.72356	130.0147	5840.827	20.82613	130.0147	18.81645
Median	0.475000	78.46170	129.0041	1269.320	13.70000	129.0041	17.98000
Maximum	0.500000	228.3717	150.2980	24140.63	76.80000	150.2980	29.80000

Minimum	0.350000	4.131000	111.9433	23.81000	0.200000	111.9433	10.50000
Std. Dev.	0.053759	63.85491	12.21667	7898.456	19.40322	12.21667	3.836578
Skewnes	1.241875	0.594693	0.442803	1.132418	1.569589	0.442803	0.913481
Kurtosis	2.913926	2.642950	2.366218	2.831894	4.248810	2.366218	4.446283
Jarque-Bera	2.573511	1.991907	0.494157	6.662078	14.74304	0.494157	7.013135
Probability	0.276165	0.369371	0.781079	0.035756	0.000629	0.781079	0.030000
Sum	4.530000	2223.430	1300.147	181065.6	645.6100	1300.147	583.3100
Sum Sq. Dev.	0.026010	122323.5	1343.224	1.87E+09	11294.55	1343.224	441.5799
Observations	31	31	31	31	31	31	31

Source: *E-views 10.0 Output*

The mean of 0.453%, insinuates that the level of human capital development Nigeria is not improving. The maximum and minimum values for the variables showed 0.5000% and 0.350% for HDI respectively. The standard deviation 0.054% asserts a very wide variation in human capital development which signifies unstable human capital development in Nigeria. The mean of external debt stock (EXDSK) show that 71% of human capital development (HDI) in Nigeria is affected by the external debt stock. The maximum and minimum values showed 228% and 4.13% for EXDSK respectively while the standard deviation is 63.33% and these show that external debt stock is very high in Nigeria, suggesting that Nigeria is heavily indebted. Exchange rate (EXR) has mean of 130.0147% with minimum value of 111.9433% and maximum values of 150.2980% respectively. However, the standard deviation of 12.21667% indicates high variation in exchange rate (EXR) showing that the Nigerian economy is relatively unpredictable, risky and capable of discouraging investment in the country. Interest rate (ITR) has a mean of 18.81645%, standard deviation of 3.836578% with minimum and maximum values of 10.50000% and 29.80000% respectively, suggesting also asserts that the Nigerian economy is unpredictable and risky.

Augmented Dickey-Fuller Unit Root Test

Summary Unit Root test for Stationarity.

Variables	ADF Statistic	Order Of Integration	Level of Significance
HDI	-5.328712	1(1)	5%
EXR	-4.130362	1(0)	5%
ITR	-6.657659	1(0)	5%
IFR	-5.128101	1(0)	5%
EXDSK	-4.298724	1(1)	5%
EXDS	-4.030147	1(1)	5%

Source: *Researchers compilation using E-views 10.0 output*

The variables used in the analysis were subjected to Augmented Dickey Fuller (ADF) Tests, to confirm their stationarity. The test aimed to understand the state at which the variables could be held stable for regression analyses. The result of the ADF test indicated mixed stationarity with some variables being stationary at 5% level [1(0)] while others were stationary at first difference [1(1)].

Auto Regressive Distributive Lag Test (Bounds Test)

The Auto Regressive Distributive Lag (ARDL) test is used because it is the most suitable tool of analyses that accommodates both the short and long run trends in testing the relationship between the dependent and independent variables.

External Debt and Human Capital Development in Nigeria

Result of the ARDL (Bounds) Test for Cointegration Between for External debt and Human Capital Development.

ARDL Bounds Test
Date: 10/18/19 Time: 15:41
Sample: 1990 2018
Included observations:31
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	K
F-statistic	1.03773	5

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.26	3.15
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

The result of the bound test shows that the F-statistic is 1.03773 and is less than the lower bound at 1%, 2.5%, 5% and at 10% significance levels which indicates that there is no cointegration between the variables. This implies that there is no long run relationship between external debt and human capital development in Nigeria.

Short Run Model of the Relationship Between External Debt and Human Capital Development in Nigeria.

Dependent Variable: HDI
Method: ARDL
Date: 10/18/19 Time: 15:40
Sample (adjusted): 1987 2018
Included observations: 31 after adjustments
Maximum dependent lags: 2 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (3 lags, automatic):
Fixed regressors: C

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
HDI(-1)	1.009542	0.020069	4.330472	0.0000
EXDSK	5.354320	0.236378	2.844943	0.0123
EXDSK(-1)	3.001402	0.140545	2.570296	0.0222
EXDSK(-2)	1.001971	0.000609	3.237202	0.0060
EXDSK(-3)	-0.621418	0.000512	-1.767653	0.3151
EXDS	-45.66151	12.35098	-0.696996	0.6124
EXR	-0.241815	0.001893	-0.958762	0.7539
EXR(-1)	-0.000834	0.001854	-0.449686	0.6598
EXR(-2)	-0.004077	0.002037	-1.001636	0.8651
ITR	-251.9292	1.090582	-0.310043	0.5366
IFR	6.330635	3.374839	1.875833	0.3817
IFR(-1)	-16.87217	2.914867	-0.578832	0.5719
IFR(-2)	-20.03034	2.731053	0.733429	0.4754
IFR(-3)	-59.69446	21.26970	-1.806549	0.2140
C	12192.43	3.100438	3.932485	0.0015

R-squared	0.799277	Mean dependent var	31664.68
Adjusted R-squared	0.738553	S.D. dependent var	35940.06
S.E. of regression	1367.045	Akaike info criterion	17.58494
Sum squared resid	26163385	Schwarz criterion	18.29216
Log likelihood	-239.9816	Hannan-Quinn criter.	17.80643
F-statistic	13.81362	Durbin-Watson stat	2.641325
Prob(F-statistic)	0.93573		

From the ARDL test result, the regression equation for external debt stock (EXDSK) and human capital development index is presented thus:

HDI = 1.009542 + 5.354320 EXDSK + 45.66151 EXDS + 0.241815 EXR + 251.9292 ITR + 6.330635 IFR + U.

The ARDL revealed that the constant parameter (HDI) is positive at 1.009542 which implies that if all the independent variables are held constant, HDI as the dependent variable will

grow by 1.009542 units. The result of the analysis indicates that human capital development is an endogenous variable in the model of the effect of external debt stock on human capital development in Nigeria.

External Debt Sock (EXDSK): The coefficient of EXDSK being positive at 5.354320 with positive t-statistics of 2.844943 and probability value (p. =0.0123 < 0.05) shows that EXDSK has positive and significant effect on human capital development in Nigeria. External Debt Servicing (EXDS): The coefficient of EXDS which is negative at 45.66151 with negative t-statistics of 0.696996 and probability value (p. =0.6124 > 0.05) shows that EXDS has negative and insignificant effect on human capital development in Nigeria.

Exchange Rate (EXR): The coefficient of EXR being negative at 0.241815 with negative t-statistics of 0.958762 and probability value (p. =0.7539 > 0.05) shows that EXR has negative and insignificant effect on human capital development in Nigeria. Interest Rate (ITR): The coefficient of ITR is negative at 251.9292 with negative t-statistics of 0.310043 and probability value (p. =0.5366 > 0.05) shows that ITR has negative and insignificant effect on human capital development in Nigeria. Inflation Rate (IFR): The coefficient of IFR which is positive at 6.330635 with positive t-statistics of 1.875833 and probability value (p. = 0.3817 > 0.05) shows that IFR has positive and significant effect on human capital development in Nigeria.

Auto Regressive Distributive Lag Test (Bounds) Test Result

ARDL Bounds Test
Date: 10/18/19 Time: 15:05
Sample: 1987 2018
Included observations: 31
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	K
F-statistic	2.13454	4

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

The result of the bound test shows that the F-statistic is 2.13454 is less than the lower bound at 1%, 2.5%, 5% and at 10% significant levels and clearly shows a case of no co-integration between the variables. This implies that there is no long run relationship between foreign direct investment and human capital development in Nigeria.

Short Run Model of the Relationship Between External Debt and Human Capital Development in Nigeria.

Dependent Variable: HDI
Method: ARDL
Date: 10/18/19 Time: 15:40
Sample (adjusted): 1987 2018
Included observations: 31 after adjustments
Maximum dependent lags: 2 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (3 lags, automatic):
Fixed regressors: C

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
HDI(-1)	1.009542	0.020069	4.330472	0.0000
EXDSK	5.354320	0.236378	2.844943	0.0123
EXDSK(-1)	3.001402	0.140545	2.570296	0.0222
EXDSK(-2)	1.001971	0.000609	3.237202	0.0060
EXDSK(-3)	-0.621418	0.000512	-1.767653	0.3151
EXDS	-45.66151	12.35098	-0.696996	0.6124
EXR	-0.241815	0.001893	-0.958762	0.7539
EXR(-1)	-0.000834	0.001854	-0.449686	0.6598
EXR(-2)	-0.004077	0.002037	-1.001636	0.8651
ITR	-251.9292	1.090582	-0.310043	0.5366
IFR	6.330635	3.374839	1.875833	0.3817
IFR(-1)	-16.87217	2.914867	-0.578832	0.5719
IFR(-2)	-20.03034	2.731053	0.733429	0.4754
IFR(-3)	-59.69446	21.26970	-1.806549	0.2140
C	12192.43	3.100438	3.932485	0.0015

R-squared	0.799277	Mean dependent var	31664.68
Adjusted R-squared	0.738553	S.D. dependent var	35940.06
S.E. of regression	1367.045	Akaike info criterion	17.58494
Sum squared resid	26163385	Schwarz criterion	18.29216
Log likelihood	-239.9816	Hannan-Quinn criter.	17.80643
F-statistic	13.81362	Durbin-Watson stat	2.641325
Prob(F-statistic)	0.93573		

From the ARDL test result, the regression equation for external debt stock (EXDSK) and human capital development index is presented thus:

HDI = 1.009542 + 5.354320 EXDSK + 45.66151 EXDS + 0.241815 EXR + 251.9292 ITR + 6.330635 IFR + U.

The ARDL revealed that the constant parameter (HDI) is positive at 1.009542 which implies that if all the independent variables are held constant, HDI as the dependent variable will

grow by 1.009542 units. The result of the analysis indicates that human capital development is an endogenous variable in the model of the effect of external debt stock on human capital development in Nigeria.

External Debt Sock (EXDSK): The coefficient of EXDSK being positive at 5.354320 with positive t-statistics of 2.844943 and probability value (p. =0.0123 < 0.05) shows that EXDSK has positive and significant effect on human capital development in Nigeria. External Debt Servicing (EXDS): The coefficient of EXDS which is negative at 45.66151 with negative t-statistics of 0.696996 and probability value (p. =0.6124 > 0.05) shows that EXDS has negative and insignificant effect on human capital development in Nigeria.

Exchange Rate (EXR): The coefficient of EXR being negative at 0.241815 with negative t-statistics of 0.958762 and probability value (p. =0.7539 > 0.05) shows that EXR has negative and insignificant effect on human capital development in Nigeria.Interest Rate (ITR): The coefficient of ITR is negative at 251.9292 with negative t-statistics of 0.310043 and probability value (p. =0.5366 > 0.05) shows that ITR has negative and insignificant effect on human capital development in Nigeria. Inflation Rate (IFR): The coefficient of IFR which is positive at 6.330635 with positive t-statistics of 1.875833 and probability value (p. = 0.3817 > 0.05) shows that IFR has positive and significant effect on human capital development in Nigeria.

Diagnostic Tests:

The result of the study indicates that all the Variance Inflation Factor (VIF) are below five (5) which means that there is absence of Multi-collinearity in the model. The p. value of the model is greater than 0.05, which connotes that the model is serially correlated at 5% significance level.The results show that the probability values are greater than 0.05. The study therefore submits that model is not Heteroskedastic and the result obtained from the estimated model is unbiased. RESET test result shows that the p. value is less than 0.05 which asserts that the model is well specified and is good for estimation.

Test of Hypothesis

The test is carried out at 0.05 level of significance.

Ho_5: External debt has no positive and significant effect on human capital development in Nigeria.

H_5: External debt has positive and significant effect on human capital development in Nigeria.

Short run F-Statistics	**2.13454**	**10% significance**	**5%. Significance**	**2.5% significance**	**1% significance**
1(0) Bounds		2.45	2.86	2.25	3.74
1(1) Bounds		3.52	4.01	4.49	5.06

The F-statistics for Bound test (1.03773) is less than the lower (2.26) and upper (3.15) critical bounds values indicating no long run effect in the model. The F-statistics for short run ARDL

model is 13.81362 with p.value of 0.93573. The p.value is greater than 0.05. The study therefore concludes as follows:

- ✓ Long Run Effect: External debt has no long run effect on human capital development in Nigeria.
- ✓ Short Run Effect: External debt has positive and significant short run effect on human capital development in Nigeria.

Discussion of Findings

The finding asserts no long run effect of external debt stock on human capital development in Nigeria but the existence of a positive and significant short run effect on human capital development in Nigeria. The implication of this is that long term debts do not impact positively on human capital development. Also the huge external debt of the Nigeria has negative effect on the well being of its human capital. The result of our finding is consistent with the work of Ibi and Aganye (2015) and Egungwu, (2018).

Conclusion and Recommendation

This study analyses external debt impact on human capital development in Nigeria. The specific objectives are to The specific objectives are to examine, determine, assess, explore and ascertain the effects of external debt stock (EDSK), external debt servicing (EDS), exchange rate (EXR), Inflation rate (IFR) and interest rate (ITR) on human capital development in Nigeria. The researcher employed analysis technique of Descriptive statistics, Augmented Dickey Fuller test for unit roots, Autoregressive Distributive Lag and Diagnostic tests in this study. The results of the Augmented Dickey Fuller stationarity test indicates that both the dependent and independents variables attained stationarity at level 1(0) and first differences 1(1) of stationarity which necessitated the use of Autoregressive Distributive Lag (ARDL) for the analysis. Again the study carried out diagnostic test to analyse the reliability of the models with the Normality, Serial Correlation, Multi-collinearity, Heteroskedasticity, and Ramsey RESET Tests.

The variables used for external debt stock showed mixed stationarities. ARDL test confirmed only the existence of short run relationship. The adjusted R-Squared is 0.738553 which means that 74% of the total variables of Human Development Index (HDI) can be explained by the dependent variables of EXDSK, EXDS, EXR, ITR AND IFR while the remaining 26% is due to stochastic variables. The Durbin Watson at 2.641325 means the model is free from autocorrelation. The F-statistics is 13.81362 which imply that all the explanatory variables in the study have significant effect on human capital development in Nigeria. External debt stock therefore has no long run effect on human capital development but has positive and significant short run effect on human capital development in Nigeria.

Finally, the variables used revealed mixed stationarities when subjected to ADF test. ARDL test revealed only the existence of short run relationships between external debt stock and human capital development. There is no existence of multicolinearity in the models and no presence of serial correlation. There is no heteroskedasticity in the models which are therefore well specified and good for estimation.

Conclusion and Recommendation

This study supports that external debt stock can be used to address human capital development challenges in a developing economy like Nigeria on a short run basis as it showed positive and significant impact.

External debt should be contracted solely for short term investments with economic reasons and not for any political reasons or white elephant projects without economic justifications. This is to avoid accumulation of unserviceable external debt stock overtime leading to debt overhang. The Debt Management Office (DMO) which is saddled with the management of Nigeria's external debt, must ensure that projects financed with external debt funds are not regenerative. Additionally, the DMO must ensure that external debt are not appropriated through corruption and hope on future generation to repay them for no feasible source. Furthermore, the country is advised to diversify its alternative revenue base, increase local contents and rely less on imports.

REFERENCES

Abula M., & Ben D. M., (2016).The impact of public debt on economic development of Nigeria: *Asian research journal of arts & social sciences (1),7,5*

Adepoju, A.A, Salau, A.S & Obayelu, A.E (2007). The effects of external debt management on sustainable Economic growth and development: Lessons from Nigeria. *Munich Personal RePEC Achieve (MPRA).* Paper No. 2147.

Ajayi, S. I. & Khan, M. S. (2000). External debt and capital flight in Sub-Saharan Africa, International Monetary Fund.

Atueyi C. L. (2019) . External debt on human capital development in Nigeria. *International Journal of business economics 7(1), 49-58.*

Egungwu, I. K. (2018). Impact of external debt on human capital development in Nigeria. IDOSR Journal of current issues in social sciences.

Ejigayehu, D. A. & Persson, J. (2013). The effect of external debt on economic growth – A panel data analysis on the relationship between external debt and economic growth: *International Journal of Economics and Finance*, 6(4), 7

Ezeabasili, V. N. & Mojekwu, J. N. (2012). An empirical analysis of fiscal deficits and interest rate in Nigeria. *Journal of Economics and International Finance,* 3, 4 - 23.

Ezeabasili, V. N. (2006). Nigeria external debt: past, present and future. *The certified National Accountant,* 14(1) 25 – 43.

Ezeabasili, V. N., Isu, H. O. & Mojekwu, J. N. (2011). Nigeria's external debt and economic growth: An Error Correction Approach: *International Journal of Business and Management,* 6(5) 156 – 170.

Folorunso, B. A & Falade, O. E. (2013). Relationship between fiscal deficit and public debt in Nigeria: an Error Correction Approach. 5 (6):346-355.

Fosu, A. K. (1996). The impact of external debt on economic growth in Sub Saharan African: *Journal of Economic Development, 21(1),* 93-118

Igudia P. O. (2021). Impact of external debt servicing on human capital development in Nigeria: *International Journal of Business & Law Research, 9(3):38-55*

Izuchuku, C.N (2017). Effect of external debt on human capital development in Nigeria: *international Journal of business research 7(5) 12-39*

Kasidi, F. & Said, A. M. (2013). Impact of external debt on economic growth: A Case Study of Tanzania. *Advances in Management & Applied Economics,3(4),* 59-82

Obademi, O. E. (2013). An analysis of the impact of external debt on banks performances. Evidence from Nigeria. *British Journal of Arts and Social Sciences, 12(1),* 37 – 51.

Ogbeifun, M. I. (2007). The politics of external debt relief: Nigeria's unique experience. *African Journal of Stability and Development,* 1(1), 37 – 43.

Olanrewaju, M. H., Abubakar,S. & Abu, J. (2015). Implications of external debt on the Nigerian Economy: Analysis of the Dual Gap Theory: *Journal of Economics and Sustainable Development, 6(13),* 238 – 248.

Rasheed A. O., & Olusola O. O., (2016). Management of Nigeria external debt (MNED): *International Journal of Accounting and Finance Research (5),3,2*

Udeh S. N., Ugwu J. I., & Onwuka I. O., (2016). External debt and economic growth: the Nigeria experience: *European Journal of Accounting Auditing and Finance Research (4),2,7*

Ugwuebe, S.U., Okafor, I.G. & Akarogbe, C.A. (2016). The effect of external borrowing and foreign aid on economic growth in Nigeria. *International Journal of Academic Research in Business and Social Sciences,* 6(4), 115-175

Umeora, C. E & Ikeora, E. J. (2016). Effects of government fiscal deficits on money supply in NIGERIA, 1970 – 2014: *International Journal For Research In Business, Management And Accounting ISSN: 2455-6114*