EVALUATING DEBT BURDEN AND REVENUE LEAKAGES ON HUMAN DEVELOMENT IN NIGERIA

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ABSTRACT

This study focused on external debt and human capital development in Nigeria. It sought to assess the significance of external debt, and to suggest measures that could enhance its effectiveness and human capital development in Nigeria. To achieve the objective of the research, some external debt and human development capital indicators, using the ex-post facto research design was applied. The data were collated, analyzed and tested using the descriptive statistics and the autoregressive distribution lag (ARDL) data analysis techniques. From the analysis, external debt service payment and external debt burden both non-significantly, but adversely affect human development index in the Nigerian economy. Based on the findings, the study recommended that external debt finance should be channeled to only projects with the highest priority. In doing so, defining the purpose, duration, moratorium requirements and commitments, negotiation fees, etc, including the conditions under which the government can approve and guarantee external loans. Also, one superior method of negotiation should be maintained by the government for varying amortization and fixed interest payment. Also, multi-year rescheduling should be adopted, rather than the year-by-year approach.

Introduction

Since gaining their independence, several West African nations have adopted diverse policies and strategies at different stages of their development in response to the need for sustainable development and robust growth. However, using external debt to push nations toward sustainable growth became commonplace starting in the 1970s due to inefficiencies in the region's economic, financial, and institutional arrangements in the 1960s (Claessenet, 2016). Economic research has focused extensively on the advantages of external credit and the negative consequences of excessive external debt accumulation on the development of human capital and economic growth. The necessity of funding vital social and economic infrastructure in the face of insufficient or deficit national budgets is one of the main justifications for borrowing from outside sources. Notably, West African nations' foreign debt stocks have grown dramatically

over the last few decades, making the discussion of its role in funding these nations' development processes especially crucial (World Bank, 2017). It has been established that by the 1980s, when the global debt crisis engulfed several countries, the external debt of African economies had grown to unmanageable proportions, and that these economies were also battling the associated adverse macroeconomic consequences. These economies are more vulnerable to a number of distortionary problems, including exchange rate fluctuations, abrupt halts in capital flows, and sharp capital outflows, which could potentially escalate into a full-blown macroeconomic crisis, because external debt is rarely denominated in the currency of the borrower country (Arikawe, 2003).

However, there was reason for concern on a global scale as the economic and social conditions in sub-Saharan Africa and other developing economies deteriorated, especially in the first half of the 1990s. High population growth rates, falling per capita output levels, and poor or declining output growth rates were some of the internal causative variables. Policy errors and failures in domestic macroeconomic policy were further connected variables. expanding inflation, high unemployment, expanding fiscal deficits, and capital flight were the outcomes of these consequences (Ezenwa, 2012). According to the empirical data that is now available, for example, from 1980 and 1989, the average yearly fall in per capita income (as determined by gross national product per person) in sub-Saharan Africa was 2.2%. Between 1985 and 1990, the terms of trade decreased by 9.1%; exports were unchanged, but imports fell at an average annual rate of 4.3%. According to the frequency distribution of inflation rates in sub-Saharan Africa, the proportion of nations with inflation rates of 10% or less increased from 46% in 1990–1994 to 54% in 1985–1989 and 28% in 1981–1984, reaching almost 61% in 1995–1997 (Emmanuel, 2012).

The severity of imports, the decline in international capital flows, the high global interest rates, the rise in protectionism in the developed nations, and the low and declining prices of primary commodities all demonstrated the generally unfriendly international economic climate. From an average of US$20 billion per year in the early 1980s to roughly US$12 billion after the mid-1980s, capital flows in sub-Saharan African nations decreased. Current account and balance-of-payments deficits grew as capital flows into African nations decreased, leading to an increase in the stock of external debt.

Creditors (Paris Club, London Club, and others) created and put into effect a number of solutions to address the debt issue, including debt restructuring, debt swaps, and debt rescheduling, in order to guarantee complete debt payment. These financial rescue efforts by the creditor nations and institutions are necessary because, in spite of these interventions, the governments of developing nations—particularly those in Sub-Saharan Africa—continued to default on their debts. Additionally, the first comprehensive campaign to end unsustainable debt and support the world's poor economies' permanent departure from debt dependence was the Heavily Indebted Poor Countries (HIPCs) initiative, which was launched in 1996 by the World Bank and the International Monetary Fund (IMF). Western leaders agreed to pay off significant amounts of the external debt of various African countries under this effort. Private and public creditors, as well as the World Bank and International Monetary Fund (IMF), were included in the debt relief framework after the Heavily Indebted Poor Countries (HIPC) Initiative was introduced in 1996. Additionally, thirty African nations received US$76 billion in debt-service relief from the Multilateral Debt Relief Initiative (MDRI) in 2005. For nations finishing the Heavily Indebted Poor Countries Initiative procedure, the Multilateral Debt Relief Initiative provided 100% relief on qualified debts owed to the World Bank, the African Development Fund (AfDF), and the International Monetary Fund (International Monetary Fund, 2019). However, due to recent unrestrained borrowing, the devaluation of local currencies, and the decline in commodity prices, the majority of these nations have seen an increase in their foreign debt holdings.

Economic growth and development remain elusive in West African countries even after the first Heavily Indebted Poor Countries Initiative and Multilateral Debt Relief Initiative debt reduction packages were implemented more than 20 years ago. This is because the majority of African nations are still heavily indebted and are quickly reverting to their massive debt burden and debt overhang. Mozambique, whose external debt was reduced from 116% of GNI in 2000 to 60% in 2005, was a notably disproportionate recipient of Africa's debt forgiveness programs. In 2011, the percentage of gross national income fell even further to 36%. According to the World Bank (2017), it has risen

to 69.5% of GDP by 2015. Other African nations like Angola, Cameroon, Gabon, Senegal, and Zambia exhibit comparable patterns. They have also been hit with a number of debt reschedulings while dealing with this dilemma, which has made the financial situation worse.

The structure and trend performance of West African economies are comparable to those of sub-Saharan Africa. The weight of accrued foreign debt repayment and servicing is prevalent among the patterns. While it is true that West African economies lack sufficient resources, a significant amount of those resources are allocated to servicing and repaying external debt (Idris, 2014). It is true that servicing and repaying foreign debts entails significant socioeconomic costs. Weak public financial management, which leads to a variety of negative changes in macroeconomic fundamentals, including exchange rate mismanagement, may necessitate the use of external borrowing. Speculative capital flight is caused by the expectation of currency devaluation (Imimole et al., 2014). The research also suggests that severe import strangling may result from insufficient capital inflows brought on by debt overhang. Import shortages are exacerbated by import strangling, which impedes export growth. Real output declines as a result of shrinking investment and shortages of necessary imports, which are caused by the debt overhang and other concerns. The intensity of debt is also quite concerning when considering the exceptionally limited and fragile production base, as well as the low ability of many African nations to fulfill their debt servicing commitments. These consequences, which undoubtedly spur additional research, are an empirical issue (John et al., 2022).

However, it is important to note that there is a wealth of empirical evidence showing that foreign loans can be a useful supplementary to the development of human capital and economic growth if they are obtained responsibly and used effectively (Cassimon & Vaessen, 2007; Claessens & Diwan, 1990; Easterly, 2002; Ferrarini, 2008). Countries like South Korea, Chile, Brazil, and Ghana are examples of those who have effectively used debt in their processes of growth and development (Muhanji & Ojah, 2011). This study aims to investigate the impact of foreign debt burden and revenue leaks on Nigeria's human development index in light of these and other factors.

1.1 Statement of the Problem

Three main categories can be used to group the literature on the relationship between debt and human capital development. According to the first strand (Ali & Mustafa, 2012; Ciftcioglu & Sokhanvar, 2018; Dey & Tareque, 2019; Edo et al., 2020; Karagol, 2002; Soydan & Bedir, 2015; Were, 2001), external debt has a detrimental impact on the development of human capital. This line of thought supports the neoclassical economists' view that debt is equivalent to future taxes and emphasizes the detrimental consequences of excessive debt. According to the second strand (Amin & Audu, 2006; Baker & Hassan, 2008; Joshua et al., 2020; Ogunlana, 2016; Pattillo et al., 2011), external debt has a favorable effect on the development of human capital. Their viewpoint backs up the Keynesians' contention that rising public debt has a beneficial effect on growth and development and is essential for economic recovery. Investigating a non-linear relationship between the two macroeconomic variables is the focus of the third strand, which integrates the prior two strands. Asafo et al. (2019), Blavy (2006), Schclarek (2004), Schclarek & Ramon-Ballester (2005), Senadzar et al. (2018), and Soydan and Bedir (2015) are among the studies that do not find evidence of a non-linear relationship between external debt and human capital development in this strand. However, other studies, including Adam & Bevan (2005), Cordella et al. (2005), Deshpande (1997), Dogan & Bilgili (2014), Ouedraogo (2015), Pattillo et al. (2002), and Qureshi and Liaqat (2020), assert that the relationship is non-linear. As a result, research on the presence or absence of nonlinearity in the relationship between foreign debt and human capital growth has yielded conflicting results. Daud & Podivinsky (2014) support this claim by arguing that research on the two variables' relationship is far from comprehensive or definitive, particularly for developing economies.

Although there is proof that foreign credit has an impact on economic and human development, no study has determined and contrasted the ways in which debt load and revenue leaks affect the development of human capital in Nigeria. In light of this, the purpose of this study is to investigate and contrast the impact of debt load and revenue leaks on Nigeria's human development index.

Specifically, this study is designed to:

i. Examine the effect of external debt burden on human development in Nigeria;

ii. Assess the effect of external debt service payment on human development index in Nigeria.

2.1 Theoretical Framework

Debt overhang theory

The debt overhang theory is predicated on the idea that the predicted cost of debt servicing will probably increase as a function of the nation's output level if debt will eventually surpass the country's ability to repay it. According to Claessenset (2016), some of the profits from domestic investments are thus "taxed away by existing foreign creditors and investment by domestic and new foreign investors is discouraged." Because a portion of the growth in output and exports will be utilized to pay off the external debt, the debtors' country only sees a partial increase in these factors.

According to this theory, lowering debt would boost one's ability to invest and repay debt, increasing the likelihood that the remaining amount will be paid back. The debtor is considered to be on the "wrong side" of the debt laffer curve when this effect is significant. The relationship between the size of the debt and the amount owed is known as the debt laffer curve. Nonetheless, the concept of the debt laffer curve also suggests that there is a threshold at which taking on debt spurs economic expansion (Elbadawi, 2014).

Lensink & White (1999) contend that there is a threshold at which additional aid is harmful to growth, using an aid laffer curve. According to Greene and Khan (1990), future prospects are bleak and foreign direct investment is currently insignificant in highly indebted nations. Widespread inflation brought on by fiscal deficits has undermined the motivation to save and increased dependency on foreign funding. The extent of the debt overhang is far greater, affecting not only investments in tangible assets but also any activity that entails paying expenses up front in order to produce more later. These initiatives include spending on technology and human capital (health and education), which may have an even greater impact on growth over time. How the government is anticipated to raise the funds required to cover external debt servicing and whether private and public investment complement each other will determine how a debt overhang deters private investment. For instance, private investment is likely to be deterred if a government imposes a capital charge or an inflation tax (John et al, 2022). The debt overhang theory serves as the foundation for this investigation.

Dependency Theory

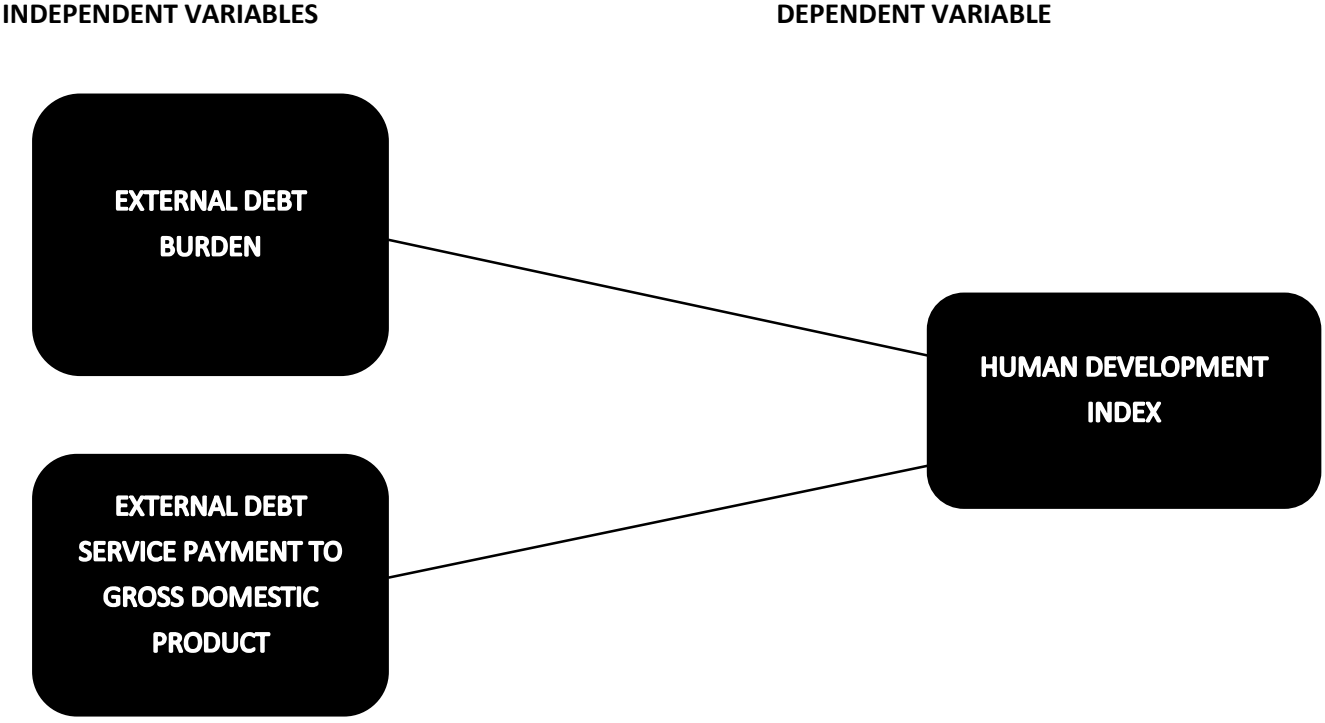
According to dependency theory, the poverty of peripheral nations is caused by their integration into the global system, not just by their lack of integration or complete integration, as free market economists sometimes contend. From this perspective, a popular school of thought is held by Bourgeoisie scholars, who believe that domestic disasters are the cause of underdevelopment and the ongoing reliance of less developed nations on developed nations. They think that their lack of close integration, capital diffusion, low technological level, inadequate institutional framework, weak leadership, corruption, mismanagement, etc., may all be used to explain this problem (Momoh & Hundeyin, 2009).

According to the proponents of this school of thinking, third world countries' underdevelopment and dependence are caused within rather than externally. According to this school of thinking, third-world nations should go to other countries for aid, loans, investments, and other forms of support in order to solve their problems. They should also permit multinational corporations (MNCs) to continue operating as usual.

2.2 Conceptual framework

This study seeks to examine the effect of external debt burden on human capital development among West Africa Monetary Zone member countries. The independent variables are external debt burden and external debt service payment to gross domestic product, while the dependent variable is human development index. The control variables for this study include climate change, gender inequality, gross domestic product and exchange rate.

Figure 2.1 Conceptual framework



Source: Author's compilation

2.3 Empirical Review

Bolanle, Fapetu, and Olufemi (2015) used an error correction model to examine the effects of foreign direct investment and external debt on Nigeria's economic growth using data from 1990 to 2013. The Johansen cointegration test shows that there is at least one cointegrating equation among the variables, but the augmented Dickey Fuller test shows that all the variables are first differenced stationary. According to short-term estimation, foreign direct investment has a negative but significant effect on Nigeria's economic growth, whereas external debt has a short-term, statistically insignificant negative impact.

Amassoma (2011) used the same approach from 1970 to 2009 and found that although there is a two-way relationship between internal debt and economic growth, there is a one-way causal relationship between the nation's external debt and economic growth.

Aluko and Arowolo (2010) used the Johansen cointegration test to establish a long-term cointegrating relationship between Nigeria's external debt, economic growth, and capital accumulation. From 1980 to 2012, Nigeria's external debt and economic growth were positively correlated, according to the ordinary least square model. Even if the variables are non-stationary and exhibit long-term convergence, the study is unable to estimate the short-term relationships between them. These studies' incapacity to evaluate the short-term association between the variables is one of its weaknesses.

Ajayi and Oke (2012) also used the ordinary least square model to empirically evaluate the impact of external debt on Nigeria's economic growth and development. The results demonstrated a positive correlation between external debt and national income, despite the study's inability to test for the presence of a unit root in its variables. The authors claimed that this did not follow the a priori prediction of a bad association. This has nothing to do with not checking the variables for the presence of a unit root, which can result in erroneous regression and results.

Imimole, Imoughele and Okhuese (2014) analyzed the determinants of external debt in Nigeria using time series data covering 1986 to

2010. Terms of trade, openness of the economy, budget deficit, gross domestic product, foreign direct investment, and exchange rate are some determinants of external debt evaluated in the study. The Johansen cointegration test shows the existence of at least two co integrating relationship among the variables in the long run and the error correction model shows that exchange rate, gross domestic product, and external debt services are significant determinant of external debt in Nigeria.

Imimole, Imoughele, and Okhuese (2014) used time series data from 1986 to 2010 to examine the factors that influence Nigeria's external debt. The study examines a number of factors that influence external debt, including terms of trade, economic openness, budget deficit, gross domestic product, foreign direct investment, and exchange rates. The error correction model indicates that exchange rates, GDP, and external debt services are important factors influencing Nigeria's external debt, and the Johansen cointegration test indicates that there are at least two cointegrating relationships between the variables over the long term.

However, Obademi's (2012) analysis of the long-term effects of public debt on economic growth in Nigeria using time series data from 1975 to 2005 demonstrates that, while external debt has a short-term positive impact on economic growth, it has a long-term negative impact.

Ezenwa (2012) estimated the short-term dynamics of real gross domestic product, foreign debt service, government spending, and average interest rate from 1981 to 2010 using the Engle Granger cointegration test and an ordinary classical regression model. The analysis found a positive correlation between economic growth and external debt service, but a negative correlation between external debt stock and economic growth.

Idris (2014) used a vector error correction model to estimate the short run relationship between external debt and economic growth in Nigeria between 1980 and 2013, and he found a unidirectional causality runs from economic growth to external debt, meaning that the level of growth in the country necessitates more debt. The short-term effects of external debt on economic growth are particularly unfavorable, whilst the long-term effects are good.

3.0 Model Specification

We created a model of debt indices and human development indices to evaluate the impact of revenue leaks and debt burden on human development in Nigeria. Consequently, this model's functional and econometric forms are provided as follows:

$$HDI = \partial_0 + \partial_1 LOGDSPGDP + \partial_1 LOGEXDB + \varepsilon$$

HDI = Human development index

EXDB = External debt burden

DSPGDP = Debt service payment to gross domestic product

Regression constant = ∂_0

Regression coefficient = ∂_1

Stochastic error term = ε

4.0 Data analysis

Table 4:1 - Basic descriptive statistics

Averages	EDSP			EXDB			HDI		
	$\bar{x}$	σ	CV	$\bar{x}$	σ	CV	$\bar{x}$	σ	CV
Nigeria	3.08	2.41	0.78	4.15	2.00	0.48	0.50	0.02	0.04

$\bar{x}$ = Mean; σ = Standard Deviation, CV=Coefficient of Variation.

Source: Authors Computation

The datasets' metrics of dispersion and central tendency, along with the corresponding coefficients of variation, are presented. The behavior of economic time series is consistent with the descriptive statistics' complete details, particularly the normalcy profile. The datasets are found to be significantly peaked (leptokurtic) and primarily fat-tailed (positively skewed).

Table 4.2 Correlation results

Correlation				
t-Statistic				
Probability	HDI	CCH	EDSP	EXDB
HDI	1.000000			

EDSP	0.446812	0.678372	1.000000	
	4.842240	8.951803	-----	
	0.0000	0.0000	-----	
EXDB	0.554260	0.841948	0.760819	1.000000
	6.456165	15.12904	11.36645	-----
	0.0000	0.0000	0.0000	-----

R = Coefficient, {} = T-stat and [] = P-value

Since the correlation coefficients are not strong enough to imply a near singular matrix, it is found that the variables are independently distributed. An examination of the outcome variable (HDI) and the primary explanatory variables revealed a substantial correlation between external debt burden and debt service payment, respectively. The table displays the linear relationship between the dependent variable and the other factors.

Test of hypotheses

Decision rule:

Reject the null hypothesis and accept the alternative if, by rule of thumb, the t-statistics are larger than 2.5 and the p-value is less than 0.05; if not, do not reject the null hypothesis.

The relevant empirical results for the test of hypotheses one and two are shown in table 4.8 below:

Table 4:3 Summary of ARDL Results

Independent Variable: HDI			
	C	**T-stat**	**P-value**
EDSP	-0.01	-0.58	0.59
EXDB	-0.04	-1.64	0.17
C	0.04	3.82	0.01
BGLM			-0.31
BPG			2.42 (0.20)
CUSUM			1.77(0.24)

Source: Computed by the Author Using E-views.

Decision on Study Hypotheses

The null hypotheses in both cases cannot be rejected, and the alternative cannot be accepted, with the conclusions that external debt service payment and external debt burden both negatively but non-significantly affect the human development index in the Nigerian economy. This is because the t-statistics for hypotheses one and two are less than 2.5, and the corresponding p-values are all greater than 0.05.

The findings for Nigeria indicate that the human development index is not significantly impacted by either the external debt burden or the external debt service payments. The HDI was negatively impacted by external debt burden by approximately 4%, whilst the HDI was negatively impacted by external debt service payments by 1%. This means that when the amount of money allocated to debt servicing increases and the amount of debt owed increases, the HDI's components—education, health, and per capita income—deteriorate. Since the t-statistics and corresponding p value are outside the acceptable range, these results are determined to be non-significant in both situations. In their research, Idris (2014) and Ijirshar, Fefa, & Godoo (2016) discovered that the external debt and its service payments had a non-significant and detrimental effect on economic growth and human development. Nonetheless, the study's findings showed that the goals had been adequately achieved and that they also supported the debt overhang argument.

5.0 Conclusion and Recommendations

The evaluation of external debt and its effects on Nigeria's human capital development was the main objective of this study. The study's conclusions showed that, as measured by the human development index (HCI), the factors used to control foreign debt had a clear and significant impact on Nigerian human development. The high coefficient of multiple determination and the test results for each individual student in the model were the indicators for this.

The equations' suitability and appropriateness for making fundamental economic decisions were demonstrated by the coefficient of determination. The study's conclusions showed that Nigeria's development is greatly impacted by its debt levels, but that repaying these debts seems to be difficult. As a result, important policies pertaining to debt variables are required in order to focus on the sustainability of economic development.

In view of the above summary of findings, the following are recommended.

i. Only the most important projects should receive external debt financing; in this case, their goals, duration, commitments and requirements for a moratorium, negotiation costs, and other details should be specified, along with the circumstances under which the government can authorize and guarantee external loans.

ii. The government should use a single, effective negotiating strategy for fixed interest payments and variable amortization. Additionally, rather than using a year-by-year strategy, multi-year rescheduling should be use.

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