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EFFECT OF PUBLIC DEBT ON ECONOMIC DEVELOPMENT IN NIGERIA

MOLOKWU Ifeoma Mirian[1], NWEKE Ukamaka Perpetua[2], OBIEKWE Chinelo[3]

[1]Department of Accountancy, Anambra state Polytechnic, Mgbakwu
[2] Bursary Department, Enugu State Polytechnic, Iwollo
[3]Department of Banking and Finance, Michael Okpala University of Agriculture, Umudike

Correspondence Email: ifeomamolokwu1@gmail.com

Abstract

The study is aimed at ascertaining the effect of Public debt on the economic development in Nigeria from 2011-2020. This was achieved through the formulation of hypotheses that were tested using data obtained from Debt Management Office (DMO) and United Nations Development Pragramme (UNDP) human development report. Ex-post factor research design was employed and analysis carried out using Ordinary Least Square (OLS) regression model. Findings revealed that there is a significant and positive relationship between external debt and economic development of Nigeria. It also showed that domestic debt has significant and positive effect on the economic development of Nigeria. The study therefore recommends that the federal government of Nigeria should ensure that secured loans are restricted only to the intended projects.

Keywords: Public Debt, External Debt, Domestic Debt, Economic Development

Introduction

High public debt may negatively affect capital stock accumulation and economic development through heightened long-term interest rates, higher tax rates, inflation and general constraint on fiscal policies, which may lead to increased volatility and lower growth rates. A great deal of attention has been focused on the external debt of Nigeria and less attention given to domestic debt despite its potential impact on economic development, government budgets, macroeconomic stability and private sector lending. Some countries have even run into domestic public debt- servicing problems since 1988, forcing them to reschedule domestic public debt on non-market basis (Adesola 2009). Developing countries facing scarcity of capital acquire debt (domestic and external) to supplement domestic savings. Pattilo Economic theory suggests that reasonable levels of borrowing by a developing country are likely to enhance itseconomic development (Pattilo, Poirson & Ricci 2002). Often, the wide gap between available domestic resources and the investment to be undertaken leads to low productivity. Ogulana(2006) posits that many countries have borrowed extensively on commercial terms from creditor agencies and raised funds from international banks and capital markets to augment the available resources. The history of Nigeria external borrowing dates back to 1958 when the sum of $28 million was contracted for railway construction. Prior to 1978, the Nigeria external debt was not much and was sustainable. The central bank of Nigeria (CBN) report in 1989 stated that 91.4% of the debt came from official source while the remaining 8.6% were the concessionary types of loans from bilateral and multilateral agencies.

Udoka and Ogege (2012) suggest that managing external debts deserve a very conscientious attention of any government as external debts often have the priority claim on the resources of any nation and it also plays an important role within the overall development strategy of a country as an erratic and uneven debt repayments can undermine long term development strategies. Nigeria economic growth and development had been volatile and highly discouraging despite the huge external loan profile before year 2000. Within the 1980's, the country experienced the most economic recession with declining growth rate, hyper inflation and high unemployment rate, disequilibrium in balance of payment, industrial decadence, poor infra-structure and serious external debt burden (Misan 2007). The poverty rate of the people was very high and the country was classified as one of the weakest economies in the world on per capital basis.

According to Okonyo-Iweala (2003), the accumulated effect of the debt at maturity began to yield some serious strains on the nations macroeconomic indices. For example naira was devalued, the nation's reserve and revenue started depreciating while the inflation and unemployment intensified. This debt crisis in Nigeria incidentally and fortunately coincided with the time international Monetary Fund (IMF) and World Bank were granting debt relief to some highly indebted poor countries of the world. This debt relief was expected to put the economy on better springboard to accelerate the pace of development and align the country on the path of economic recovery. To the contrary, Nigeria appears to be deteriorating with higher rate of unemployment, poor infrastructure development and lower standard of living.

Statement of the Problem

Debts management issues in the developing countries have remained recurrent discourse subject among public financial management scholars. The view of most scholars is that either Nigeria's domestic and external debts are not deployed in such a manner that will generate the much needed economic development or the debts are contracted under very strangulating lending conditions that the proceeds are eroded before they can support real economic development (Alagba and Eferakeya 2019).

Idenyi, Igberi and Anoke) posit that one major challenge for Nigeria's economic development over decades has been its crippling debt overhang. According to Debt Management Office (DMO 2006), Nigeria spent over $32 billion for debt services between 1985 and 2001. Obviously, greater revenue of the country was devoted in servicing her debt thus playing down investment capital and economic growth in the country. However in 2006, Nigeria had a debt relief from Paris club that saved the country from the yearly $2.3 billion the government transferred to service its debt. It was then expected that this huge amount of money would be ploughed back into the economy to generate employment, improvement in agriculture, health, education, power generation and road construction. Prior to the relief, the country was on the wrong side of debt Laffer curve, with debt crowding out investment and growth (Soludo 2003). According to debt management office, Nigeria external debt profile as at 2017 was $18,913 Billion (DMO 2018). It will continue to rise if nothing is done to control it. Some schools of thought are of the opinion that Nigeria's debt has been on the increase and inadequately managed , therefore has no significant effect on the economic development in Nigeria. However, another school of thought believes that there is a significant effect on the economic development in Nigeria despite the increase in both domestic and external debt. In the view of the above conflicting opinions, this paper is set to appraise the effect of debt on key economic variable of developing economies using Nigeria as a case study.

Objectives of the study

The broad objective of this study is to determine the effect of external debt on economic development of Nigeria. However it is set to achieve the following specific objectives:

1. To determine the effect of external debt on the Human Development Index (HDI) in Nigeria.

2. To ascertain the effect of domestic debt on the Human Development Index (HDI) in Nigeria.

Research Questions

In order to achieve the set objectives, the following research questions are formulated to guide the study:

1. What is the effect of Nigeria's external debt on the Human Development Index (HDI).

2. How does Nigeria's domestic debt affect its HDI.

Research Hypotheses

The following null hypotheses are formulated for the study:

Hypothesis 1: HO: External debt has no significant effect on the economic development in Nigeria.

Hypothesis 2: HO: Domestic debt has no significant effect on the economic development in Nigeria.

Review of Related Literature

Conceptual Review:

Domestic debt:

According to chambers dictionary, a debt is an amount owed by one person to another; what one becomes liable to do or suffer; a state of obligation or indebtedness; a duty; or a sin (Bible).Domestic debt or internal debt is the component of the total government debt in a country that is owed to lenders within the country. The main sources of funds for internal debts are commercial banks and other financial institution. In Nigeria, actual domestic debt include treasury bills and financial instruments.

External debt

External debt is the portion of a country's debt that was borrowed from foreign lenders including commercial banks, governments or international financial institutions. These loans including interest must usually be paid in the currency in which the loan was made. In order to earn the needed currency, the borrowing country may sell or export goods to the lender's country (investopedia). It has also been defined as a liability represented by a financial instrument or other formal equivalent owed to other parties (IMF, 1988). The obvious thing is all the above definitions is that, a debt is fund available for use which ordinarily does not belong to the user and such is expected to be refunded at a specified date with certain conditions attached. Soludo (2003) posits that countries borrow for two broad reasons, higher investment, higher consumption[education and health] or to finance transitory balance of payments deficits to lower nominal interest rates abroad, lack of domestic long-term credit, or to circumvent hard budget constraints. This means that countries borrow to boost economic growth and reduce poverty. To encourage growth, countries at early stages of development like Nigeria borrow to augment what they have and hence likely to have investment opportunities with rate of return higher than that of their counterparts in developing economies.

Pattillo Economics theory suggests that reasonable levels of borrowing by a developing country are likely to enhance its economic growth (Pattilo, Poirson and Ricci 2002).This means that unreasonable borrowing may have a negative impact on the economic development of a nation.

Idris and Ahmad (2017) also posit that the governmentborrowing for the purposes of carrying out its fiscal policies represents outstanding liabilities called national debt.

Human Development Index (HDI)

The HDI is a statistical composite index of life expectancy, educational and per capita income indicators which are used to rank countries into four tiers of human development. A Country scores a higher HDI when the lifespan is higher,the education level is higher and the Gross Domestic Product(GDP) per capita is higher (WIKIPEDIA). Many of the direct physical symptoms of underdevelopment are easily observable and independently measurable. Under-nutrition, diseases and illiteracy are among the stark and fundamental ills that nation would like to remove through its development efforts. For quite some time now, international agencies such as World Bank, United Nations and National Statistical Surveys have been collecting data on the incidence of malnutrition, life expectancy, infant mortality rates, literacy rates among men and women, and other various direct indicators of the health, educational and nutritional status of different populations.

The 2010 Human development report introduced an inequality Human Development Index (IHDI) while the simple HDI remain useful. It stated that IHDI is the actual level of human development (accounting for inequality) and the HDI can be viewed as an index of potential human development (or the maximum IHDI that could be achieved if there were no inequality).

The index is based on the human development approach developed by U.I Hag, often framed in terms of whether people are able to "be" and "do" desirable things in life. Examples include; being well fed, sheltered, and healthy. [UNDP 2010]

In its 2010 human development report, the UNDP began using a new method of calculating the HDI.

The following indices are used

1. Life Expectancy Index (LEI) = LE-20/85-20

LEI is 1 when life expectancy at birth is 85 and 0 when expectancy at birth is 20

2. Education index (EI) =MYSI+EYSI/2

2.1 Mean years of schooling index (MYSI) =MYS/15

Fifteen is the projected maximum of this indicator for 2025.

2.2 Expected year of schooling index (EYSI) =EYS/18

Eighteen is equivalent to achieving a master's degree in most countries.

Income Index = (11) =In GNIPC-In (100)/In (75, 000)-In (100)

11 is 1 when Gross National Income (GNI) per capita is 75,000 and 0 when GNI per capita is $100.

Finally, the HDI is the geometric mean of the previous three normalized indices;

LE: life expectancy at birth

MYS: Mean years of schooling (i.e. years that a person aged 25 has spent in formal education)

EYS: expected years of schooling (i.e.total expected years of schooling for children under18 years of age)

GN/PC: Gross national income at purchasing power parity per capita (GNDP 2010)

Theoretical framework

This research anchors on Dual gap theory, which can also be called two gap model or analysisinstruments designed by Harrod (1939) and Domar (1946). It asserts that developing country face two gaps in their economy. The first one is that between savings and investments. A developing nation starts with a very low savings but needs to invest heavily. How would countries fill this gap between savings and investments? Some school of thought argued that developing counties required aid from developed economies. Others were of the opinion that they need to trade in order to gain trade surpluses, which could be used to fill the gap. The second gap is that between exports and imports. Normally a developingcountry produces only primary goods and it requires large imports of consumer and capital goods. This leads to cost differential which invariably results to current account deficits. Many economists agreed that there has to be some role for the nation to kick-start developmental process. If a developing economy is left on free market, it would revolve around agricultural sector and its manufacturing sector would stunt thereby eliminating structural transformation of the economy. Therefore, countries have to overcome these two gaps through industrial enterprise.

Empirical Review

Akmwunmi and Adekoye (2018) studied external reserves management and its effect on economic growth of Nigeria. Secondary data were sourced from CBN, Nigeria Bureau of statistics and other related journals. Durbin Watson auto- correlation test was used to test the reliability of data. Multiple Regression was used to test the relationship between the explainable variables and external reserves management in Nigeria. The results from regression analysis show that explanatory variable explain and account for 90% variations in external reserves which is an evidence of good fit of the model. It also shows that GDP, MPR and FDI are highly statistically significant while FDI and EXR are statistically insignificant.

Ijeoma (2013) examined the impact of debt on Nigerian economy. To achieve the aim of the study, the research used external debt stock, External debt service payment and exchange rate as variables to determine their effect on Gross Domestic Product (GDP) and Gross fixed capital formation (GFCF) for the period 1980-2010. This was analyzed with linear regression, the result of the analysis reveals that Nigeria's external debt stock has a significant effect on her economic growth, it also shows that there was a significant relationship between Nigeria's Debt Service payment and her GFCF.

Ndubusi (2011) carried out a research on effect of external debt relief on sustainable economic growth and development in Nigeria using chi-square. Regression and Correlation analysis to text the relationship between external and internal debt stock in relation to debt relief. The researcher found out that there was a relationship between external and internal debt stock in relation to debt relief, that debt relief affects the economic growth of the economy, it recommends that gradual reforms and investments will aid to bring back a healthy economy for the nation.

Worlu (2011) studied the Strategies for External Debt Management in Nigeria (1993-2008). The aim of the study was to examine the difference between the GDP before and after debt management strategies and to determine the extent to which external debt servicing influences economic development in Nigeria. The study was analyzed using Linear Regression. The study revealed that there is no significant difference in GDP before and after debt management strategies. It also showed that there is a significant relationship between Nigeria's economic growth and external debt servicing.

Adesola (2009) examined Debt Servicing and Economic Growth in Nigeria: An Empirical Investigation using ordinary least square multiple regression method to determine whether debt payment to Multilateral Financial creditors, Paris Club creditors, London Club creditors, Promissory notes holders and Other creditors (Non-Paris Creditors) have inverse relationship with Gross Domestic Product (GDP) and gross fixed Promissory notes holders and other creditors have significant impact on the GDP and GFCF. Debt payment to Paris Club creditors and debt payment to promissory notes holders are positively related to GDP and GFCF, while debt payment to London Club creditors showed a negative significant relation to GDP and GFCF.

Methodology

Ex_post factor research design was employed. This research work relied on the use of secondary data. The sources of data amongst others include publications from Debt Management Office (DMO) and United Nations Development Progamme (UNDP). The study used Human Development Index (HDI) as dependent variables while domestic debt and external debt were used as independent variable. Ordinary Least Square (OLS) regression model was used in the analysis of data.

Robustness Test

Robust test was done on our data using Tolerance Value (TV), Variance Inflation Factor (VIF), Ramsey Reset Test (RRT) and Breush Pagan / Cook Weisberg heteroskedasticity test.Thus shows the appropriateness of the **Model** for the study with the two explanatory variables (EXT-DEBT and DOM-DEBT).

Table 1: Collinearity Statistics

Variable	VIF	1/VIF
DDEBT	4.783	0.209052
EDEBT	4.783	0.209052
Mean VIF	4.783	

From the Table 1, the TV, being the reciprocal of VIF ranges from 0.209052 to 0.209052 which suggests non multi-collinearity feature. The VIF ranges from 4.783 to 4.783 also indicates non multi-collinearity feature.

Table 2: Breusch Pagan/Cook Weisberg Heteroskedasticity Test for the Model

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of HDI
chi2(1) = 1.34
Prob > chi2 = 0.2469

Source: STATA 15 Computational Results. See Appendix 1

The above result was obtained from the test for heteroskedasticity. The probability value of 0.2469 resulting from the test for heteroskedasticity implies that the model is free from the presence of unequal variance. Thus implies that our probability values for drawing inference on the level of significance are reliable and valid. The absence of heteroskedasticity validates the model results, which means there is no need for robust or weighted least square regression.

Table 3: Ramsey Reset Test for the Model

Ramsey RESET test using powers of the fitted values of HDI
Ho: model has no omitted variables
F(3, 4) = 3.82
Prob > F = 0.1141

Source: STATA 15 Computational Results. See Appendix 1

The above resultwas obtained from the test for miss-specification or omitted variables using Ramsey RESET Test. The probability value of 0.1141 resulting from the test implies that the model has no omitted variables.

Test of Hypotheses

OLS Regression Model was developed to test the linear relationship between the dependent and independent variables. It was operated using STATA version 15 as shown in the table 1 below:

H_{01}: External Debt has no significant effect on Economic Development of Nigeria.

H_{02}: Domestic Debt has no significant effect on Economic Development of Nigeria

Model: $HDI_t = \beta_0 + \beta_1 EXT\text{-}DEBT_t + \beta_2 DOM\text{-}DEBT_t + \mu$

Decision Rule: accept Ho if P-value > 5% significant level otherwise reject Ho

Table 4: Result on Effect of External Debt and Domestic Debt on Economic Development of Nigeria.

Source	SS	df	MS		
				Number of obs =	10
				F(2, 7) =	21.15
Model	.00538501	2	.002692505	Prob > F =	0.0011
Residual	.000891087	7	.000127298	R-squared =	0.8580
				Adj R-squared =	0.8175
Total	.006276097	9	.000697344	Root MSE =	.01128

HDI	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
EXT-DEBT	3.62e-06	1.50e-06	2.40	0.047	7.17e-06	5.96e-08
DOM-DEBT	.2705906	.0634434	4.27	0.004	.1205708	.4206105
_cons	-1.321472	.4235613	-3.12	0.017	-2.323035	-.3199087

Discussion of Findings

The result of the analysis of the study using OLS Regression Model operated with STATA version 15 is expressed as follows:

H_{01}: External Debt has no significant effect on Economic Development of Nigeria.

In view of the above analysis as shown on table 4, the result shows that there is a significant and positive relationship between External Debt and Economic Development in Nigeria with a p-value of 0.047. This could be verified with the coefficient of correlation of 3.62% which indicates that external debt has significant and positive impact on economic development in Nigeria.

Based on this, we reject the null hypothesis and accept alternate hypothesis which contends that Eternal Debt has significant effect on Economic Development in Nigeria.

H_{02}: Domestic Debt has no significant effect on Economic Development in Nigeria.

In view of the above analysis as shown on table 4, the result shows that there is a significant and positive relationship Domestic Debt and Economic Development in Nigeria with a p-value of 0.004. This could be verified with the coefficient of correlation of 0.27% which indicates that Domestic Debt has significant and positive effect on Economic Development in Nigeria.

Based on this, we reject the null hypothesis and accept alternate hypothesis which contends that Domestic Debt has significant effect on Economic Development in Nigeria

Conclusion and Recommendations

Although Nigeria's public debt has been on the increase, the findings made still revealed that external debt has positive and significant effect on the economic development in Nigeria. In the same vein, domestic (internal) debt also showed a positive and significant effect on the economic development in Nigeria.

Government at all levels should only seek external borrowing when vital priority projects are being considered and should equally place a limit on external borrowing. Secondly, Nigerian government should ensure that borrowed funds are channeled only to the projects for which loans were taken. Debt Management office (DMO) should therefore make policies which will ensure that borrowed funds are properly invested and monitored for accountability and transparency and also ensure implementation of such policies.

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