
Government Debt and Social Infrastructural Development in Nigeria

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ABSTRACT: *The study is to determine the effect of Nigeria debt on social infrastructure in Nigeria. This study utilizes ex-post facto research design. Secondary data were used and were extracted from the Nigeria budget annual report from 2002 to 2022. The variables tested were external debt, internal debt, debt service, are independent variables while expenditure on education and expenditure on health are dependent variables. The model is multiple regression analysis used in determining the extent of the effect on expenditure on education and expenditure on health. The relative statistical tool regression was employed for analysis and results obtained. The results of the analyses showed that there was positive ($Cf = 0.163238$) significant ($0.05 < 0.0059$) relationship between government external debt and expenditure on education in Nigeria while there was negatively non-significant ($Cf = -0.026210$; $0.05 > 0.7492$) relationship between external debt and expenditure on health in Nigeria. Government internal debt has positive (0.043553) non-significant (0.4556) effect on expenditure on education in Nigeria and internal debt has negative (-0.114673) and non-significant (0.2171) effect on expenditure on health in Nigeria and Growth of Nigeria's expenditure on education was positively (0.500242) significant (0.0000) effect by debt service fees as well as expenditure on health ($Cf = 0.185590$; $0.05 > 0.0399$). The study recommended that in order to guarantee that the education sector receives accurate funding allotted, policymakers should develop and put into effect suitable policies that will make the money allocated to it transparent. The government should make sure that only authentic medications and equipment are purchased and maintained, and health officer staff members should be motivated to carry out their duties with efficacy and efficiency. Doing so will significantly boost the amount of health development in the nation and raise productivity. Politicians and other policymakers must make sure that Nigeria's debt is not taken on for personal gain or political gain, but rather to boost the country's economy and guarantee that loan payments are made on schedule and in full.*

KEYWORDS: government debt, social infrastructure, external debt and internal debt

INTRODUCTION

Infrastructures are fundamental, necessary services that must be established in order for development to take place. The existence of social infrastructure can aid and speed up socioeconomic growth. Without these facilities and services, progress will be extremely challenging and, in fact, can be compared to a very rare good that can only be obtained at a very high cost. Building and maintaining facilities that support social services is considered social infrastructure. There are several of these, such as housing, healthcare (medical facilities and support infrastructure), and education (schools, universities, and student housing). Human capital development is essential for eradicating poverty and fostering more inclusive societies through investing in people through good nutrition, health care, education, employment, and skills. (**humancapital@worldbank.org**, Oct 03, 2022). Human capital recognizes the intangible assets and qualities that improve worker performance and benefit the economy. (Kimberly Amadeo 2022).

Social Infrastructure comprises long-term physical assets for high-barrier markets, such as schools, universities, hospitals, and community housing. Social infrastructure has enormous externalities. Education and health are social goods in which social marginal productivity (SMP) exceeds private marginal productivity (PMP). Therefore, private investment capital in such social infrastructure is likely to fall far short of what is needed. In that case, it is imperative for the state to provide the finance and other complementary resources for the take-off of such social infrastructural projects. The state does not necessarily have to operate or manage a social infrastructure, but it is necessary for the state to provide guidelines for and monitor its operation (familoni, 2004).

Along with other things, achieving the Sustainable Development Goals requires significant infrastructural, human capital, and climate change resilience investments. No country can successfully carry out its infrastructural projects without incurring debt or borrowing. As a result, these nations employ debt as one of their tools to meet their funding needs for growth, however at unsustainable levels that endanger economic expansion. The need to borrow arises when revenue is insufficient to cover expenditures, the government borrows money from either internal or external sources to close both short-term and long-term resource shortages and spur economic growth. Debt can be a useful tool if it is transparent, well-managed, and used in the context of a credible growth policy. Both developed and developing countries require loans to help with economic development. Debt or borrowings have been regarded as a crucial tool of fiscal policy that the government can use to finance a country's development. According to Muhammad, Ruhaini, Nathan, and Arshad (2017), debt is used to finance expenditures that will ultimately boost productivity and accelerate economic growth. In a circumstance where it is difficult to raise taxes and cut spending, government can successfully finance capital formation,

maintain public spending and promote economic development by using debt and ready to pay for the cost.

Governments borrow when their spending exceeds their revenue. This method has resulted in the majority of countries having enormous unpaid debts over time. The secret to accelerating economic growth is to take on reasonable debt to finance infrastructure and public projects. However, excessive borrowing without proper investment planning can result in a high debt load and interest payments, which can have a number of negative repercussions on the economy (Joy & Panda, 2020). Debt should be invested in a project that can recoup either at short run or long run period.

Public debt is typically divided into internal and external debt. Public borrowing or public debt is seen as a significant source of revenue for the government. Government may turn to borrowing if revenue from taxes and other sources is insufficient to pay for expenditures. In times of financial crisis and emergencies like war, droughts, etc., such borrowings may become increasingly required (Kalyana City Life, 2011).

Statement of Problem

In any nation, but particularly in emerging nations like Nigeria, debt is one of the best weapons for providing the necessary funds for the construction of social infrastructure. In order to recover and accelerate their investments, they redeem deficiency revenues. Nigerian debts, however, have different faces due to inadequate management and limited development spending. Thus, public borrowing provides a reliable way to finance government spending where available resources are not sufficient. Nigeria is an experienced borrower from multilateral, bilateral, and private lenders in a bid to fill its infrastructural gap.

A growing debt load may prevent the government from making more effective investments in public goods like infrastructure, education, and health. Nearly 83 million people in Nigeria, or 40.1% of the total population, live below the poverty line of N137,430 (\$381.75) per year, according to the country's Poverty and Inequality Report. The government of Nigeria is borrowing more money, which has a detrimental effect on the economy and hefty servicing expenses. 98% of the government's revenue in 2021—N1.8 trillion—was used to pay down debt. The overall amount of debt in the nation is N33.11 trillion, and another N5.012 trillion is anticipated in 2022. The research was conducted to ascertain the effect of national borrowing on the growth of Nigeria's social infrastructure in light of the information provided above.

Objective of the Study

The principal objective of the study is to determine the effect of government debt on social infrastructure development in Nigeria. Specifically

- To determine the relationship between external debt and social infrastructure development in Nigeria.
- To examine the effect of internal debt on social infrastructure development in Nigeria.
- To ascertain the impact of debt service charges on social infrastructure development in Nigeria.

Research Questions

- To what extent does government external debt relate to social infrastructure development in Nigeria?
- How does government internal debt affect social infrastructure development in Nigeria?
- What is Nigeria's debt service charge impact on building social infrastructure?

Statement of Hypotheses

- There is a non-significant relationship between government external debt and social infrastructure development in Nigeria.
- Government internal debt has a non-significant effect on social infrastructure development in Nigeria.
- Growth of Nigeria's social infrastructure is a non-significant effect of debt service fees.

2. Review of Related Literature

Conceptual Framework

A loan that the government takes out and records as capital revenues in the budget is known as government borrowing. It represents the entire sum of money that the federal government has borrowed to finance its programs and services. The government announces an annual borrowing program in the Budget since tax and non-tax receipts are insufficient to cover the spending program (Economic Times, 2020). Government borrowing describes the need for loans from the financial markets by the public sector to pay for expenditures not covered by revenues.

A debt is a sum of money that one entity owes another. To support themselves, make purchases, or invest in future growth, people, companies, and governments all take on debt. National debt, federal debt, and public debt are all terms for government debt. It is money that the government has borrowed to cover costs. The outstanding debt owed by a nation is referred to as its national debt (Investopedia, May 25, 2023). What the federal government owes creditors is known as the national debt. It is made up of several sorts of debt, similar to internal and external debt.

Theoretical Review

The study is anchored on the classical/traditional theory of public debt pioneered by Adam Smith, Hume and David Ricardo in the 18th century. According to the classicists, if government expenditure is financed through public borrowing, the present generation gets relieved from the cost and the burden is shifted to the future generation. The future generation suffers when the present generation reduces its savings in order to meet debt servicing obligations there by leaving

a smaller amount of capital resources for the future. Reduction of savings of the present generation will amount to reduced inherited capital and productive capacity of which the future generation will stand to lose. The theory has three (3) key assumptions namely: (i) That public debt is more costly method of financing public expenditure than taxation (ii) That if the present generation does not reduce its consumption and increase its savings, the burden of public debt may pass on to the future generation and (iii) That Excess borrowing and mounting public debt by government may undermine the very credit worthiness of a nation and therefore, debt should be kept at the barest minimum and be offset as quickly as possible.

The theory is quite relevant to this for the fact that one its critical assumptions meaningful to economic growth is warning to reduce consumption and increase savings. One of the numerous reasons for mounting public debt in Nigeria is her propensity for consumption especially imported goods and services detrimental to saving, investment and growth (Khalil &Junaidu, 2019).

This theory of classical/traditional is vital to social infrastructure development for the fact that one of critical assumptions is encouraging tax revenue rather than debt. Mounting that cost of maintaining or servicing debt will be detriment to economic and social investment development.

Empirical Review

Ani and Ngene (2021) determined the effect of Nigeria debt on capital expenditure in Nigeria. This study basically adopted an ex post facto research design. It uses annual time series data extracted from Budget Office and annual report. The data covered from 2016 -2020. For the data analysis, the study uses model, ANOVA, Coefficients and employed ordinary least squares (OLS) where capital expenditure (works, power and housing; agricultural and rural development & transportation) are the dependent variable, effect to Nigeria debt. The results revealed that there is positive and non-significant effect of Nigeria debt on capital expenditure works (power and housing agricultural and rural development & transportation) in Nigeria. The study recommended that policy makers formulate and implement appropriate policies that will ensure that Nigeria debts are effectively used for the purpose works, power and housing in Nigeria. Effective managing Nigeria debt will tremendously increase the volume of agriculture and rural development in the country. Policy makers need to ensure Nigeria debt is contracted not for selfish or political reasons but to stimulate the economy through transportation in Nigeria.

Nwamuo, and Agu, (2021) investigated the impact of public debt on the economic growth in Nigeria. Annual time series data were obtained from the Central Bank of Nigeria Statistical for the period 1981to2019 on the variables used for the study. Unit root test was conducted using Augmented Dickey-Fuller test and Phillips-Perrontest techniques and the results showed that the variables were stationary though at different levels. Co-integration test was also conducted using Johansen co-integration test method and the result showed that the variables in the model were co-integrated meaning that the variables have a long run relationship. The error correction

mechanism showed that the coefficient of multiple determination (R^2) in the over parameterized model was 0.890783 while it was 0.846548 in the parsimonious model. The short run regression result showed that external debt has a negative and insignificant impact on the economic growth in Nigeria. The short run result also showed that domestic debt has a positive and significant impact on the economic growth in Nigeria while credit to private sector has a negative and insignificant impact on the economic growth in Nigeria. The result from long run dynamic analysis revealed that external debt has a negative and insignificant impact on the economic growth in Nigeria while domestic debt has a positive and significant impact on the economic growth in Nigeria. The long run dynamic analysis also showed that credit to private sector has a positive and significant impact on the economic growth in Nigeria. Based on these findings, it was recommended that government should reduce the rate at which it takes external loans to finance its activities. Moreover, domestic debts should be properly managed by channeling it towards those activities that will stimulate economic growth.

Ezenwobi, and Anisiobi (2021) examined the resultant effect of government borrowings on economic development in Nigeria. This study span from the period of 1990 to 2020 and annual data was sourced secondarily from the World Development Indicators database (2020) and CBN statistical bulletin which were analyzed using multiple regression model with Augmented Dickey-Fuller (ADF) unit root test, Johansen co-integration, and Error Correction Mechanism (ECM). The study employed external debt (EXD), domestic debt (DOD), interest rate (INTR), and inflation (INF) as independent variables whilst the human development index (HDI) was used as the dependent variable and was a proxy for development. The result revealed a positive statistically significant relationship between external debt and economic development the same as domestic debt and economic development in Nigeria, while interest rates have a negative statistically significant relationship with economic development in Nigeria. However, inflation was found to be negatively statically insignificant to economic development in Nigeria. Based on the findings, this study recommended that the government should direct borrowed monies to sectors/areas of the economy that will spur growth, such as education, health, industry, and transportation. The education and health sectors can be enhanced with enough funding and equipment; skill learning should be made mandatory beginning in secondary school.

Ajayi and Edewusi (2020) investigated the impact of Nigeria's governmental debt on economic growth. The study acquired secondary time series data that spanned 37 years (1982-2018). The descriptive statistics, unit root test, Johansen co-integration test, and vector error correction model were used to estimate the data collected in the study. The study's findings imply that external debt has a negative long-term and short-term impact on Nigeria's economic growth, whereas domestic debt has a positive long-term and short-term impact. The study concluded that policymakers should incorporate appropriate measures to ensure the management of domestic indebtedness based on these findings. It should ensure that contracted national debts are directed toward promoting investment in the country, and government should ensure that national debts

are directed toward providing basic amenities and services required for the development of communities and societies throughout the country, through relevant monitoring bodies.

Consequently, Adegbe, Otitolaiye, Aguguom and Ajayi, (2022) investigated the effect of public debt management on economic growth in Nigeria. An *ex-post facto* research design was employed, while time-series data on the relevance of macroeconomic variables to public debt management and economic growth were sourced from secondary sources. The sample population purposively was chosen from data available from the 2020 edition of the Central Bank of Nigeria's (CBN) Statistical Bulletin, which covers 40 years (1981-2020). Results revealed that public debt management RGDP had a positive significant effect on economic growth in Nigeria ($AdjR^2 = 0.995$; $F(5, 31) = 99.562$; $p\text{-value} = 0.000$). The conclusion validated that effective public debt management tends to have a positive significant effect on economic growth in Nigeria. It is therefore recommended that adequate measures be put in place to ensure optimal investment of borrowed funds in productive ventures in Nigeria. Also, the loans should be serviced when they are due to avoid sanctions and accumulation default charges.

Eke, and Akujuobi, (2021) empirically investigated the effect of public debt on economic growth in Nigeria, covering the period 1981-2018. Employing a co-integration approach, the study revealed prominent among others that a significant short-run relationship exists between Nigeria's public debt and economic growth. Also, the study further showed that whereas both the domestic debt and the external debt variables were statistically significant, only the latter failed the a priori expectation test and thus, exerts a negative contribution to economic growth in Nigeria. On the basis of the findings, the study concluded that most of the external borrowings in Nigeria end up being misappropriated. Hence, the recommendation is that there should be proper ways of monitoring public borrowings with special emphasis on all external debts contracted with a view to ensuring that misappropriation is drastically reduced, if not eradicated.

Syder and Isagua (2021) examined the effect of public debt management on Nigerian economic performance. Ex post facto research design was adopted for the study. Secondary data were obtained from the records of Central Bank of Nigeria and National Bureau of Statistic for 1986 to 2019. Data analysis was with the aid of e-view and statistical package for social sciences. It involved diagnostics as: descriptive statistics, unit root, co-integration with autoregressive distributed lag bound (ARDL). The results indicated some dynamic trends in the effect. Domestic debt related positively and significantly with real gross domestic product within both short-run and long-run in our analytical observation. Similarly, the foreign debt related positively and significantly at the short-run period but indicated insignificantly in the long-run period. The direction of the results justified the implication of foreign exchange rate, interest rate, and market price volatility effects on the Nigeria economy due to currency devaluation and other exogenous economic shocks on the debt financing economy despite the debt managerial tenets in Nigeria. It was therefore recommended that fiscal policies on public debt management should include

parliamentary monitoring role on debt resources utilization, fiscal rule on debt performance measurement and civil organization input on debt performance reports.

Ofurum, and Fubara, (2022) investigated the impact of public debt on economic development in Nigeria between 1980 and 2019. Data were collected from the Central Bank of Nigeria (CBN) Statistical bulletin and the Augmented Dickey-Fuller(ADF), Autoregressive Distributed Lag (ARDL), and Granger Causality were used to test the hypotheses and analyze the data. The results indicate that foreign debt servicing does not have a significant impact on Nigerian real GDP. Foreign debt servicing has a negative but insignificant impact on real GDP. In addition, the result indicates that external debt does not significantly impact unemployment. External debt servicing has no significant effect on unemployment. Given the study's findings and the importance of natural resource utilisation in the Nigerian economy, the study recommends that the private sector support the government in developing technology to facilitate natural resource exploitation to generate additional revenue to finance the government budget and reduce borrowings

Ajah, and Jacob (2021) examined the effect of public debt on capital expenditure in Nigeria. Annual time series data for domestic debt, external debt and capital expenditure were collected from Central Bank of Nigeria statistical bulletin between 1981 and 2019. Philip Perron test was used to test the stationarity of the data and the Johansen cointegration test was utilized to determine presence of long run relationship. Vector Error Correction Model (VECM) was used for analysis since cointegration was established in the series. Ordinary least square method was used to test the effect of public debt on capital expenditure in Nigeria. The findings showed that domestic debt is significant and positive driver of capital expenditure in Nigeria. But external debt shows insignificant relationship with capital expenditure in Nigeria. Hence, public debts remain a driver of capital expenditure in Nigeria as the F-statistics show a good fit. It is recommended that government debt should be contracted for productive components of expenditure and not on non-productive components of government expenditure. The government should equally reduce external debt used in deficit financing in order to increase debt from domestic sources of deficit financing.

Abu, David, and Ben (2022) employed the bootstrap autoregressive distributed lag (ARDL) approach alongside the dynamic ARDL simulations technique to investigate the non-linear effect of public debt on public expenditure in Nigeria during the 1981–2020 periods. The result of the bootstrap bounds test illustrates the presence of a long-term relationship between public expenditure and public debt (along with oil rents, output growth and urbanisation). Further, the estimation results indicate that the effect of public debt on public expenditure is non-linear. In particular, public expenditure increases at early stages of rising public debt but declines at latter phases when public debt grows beyond specific threshold. This empirical outcome is further validated by the dynamic ARDL simulations approach which shows a significant decline in predicted public expenditure after short-term expansion due to counterfactual shock in public debt. Thus, policies which diversify public revenue from oil production and a reversal of the

rising trend in public debt are recommended to avert the adverse welfare implications of declining public expenditure.

In empirical summary, this study aims to fill the gap in research on debt's effect on social infrastructure development in Nigeria, a crucial sector for economic growth. It highlights the importance of capital expenditure in Nigeria's future economic growth.

METHOD OF STUDY

Research Design

This study adopted *ex-post facto* design. It uses annual time series data extracted from Budget Office and annual report. The data covered from 2002 to 2022. The method of analysis used in this study to determine the effect among the variables is descriptive; coefficients and multiple linear regression analysis were applied where the external debt (EDTEE), internal debt (IDTEE) and debt service change (DSTEE) are the relevant variables. The expenditure on education (EETEE) and expenditure on health (EHTEE) are the dependent variable.

Model specification

Multiple linear regression analysis was model applied which states that the dependent variables Y is a function of the independent variables, X. mathematically, $Y = f(xi)$

Such that $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e_t$ in this study, we have that

$$EETEE_t = \beta_0 + \beta_1 EDTEE + \beta_2 IDTEE + \beta_3 DSTEE + e_t$$

$$EHTEE_t = \beta_0 + \beta_1 EDTEE + \beta_2 IDTEE + \beta_3 DSTEE + e_t$$

Where

EHEE_t = Expenditure on health at time (independent variable)

EETEE_t = Expenditure on education at time (independent variable)

EDTEE_t = External debt at time (dependent variable)

IDTEE_t = Internal debt at time (dependent variable)

DSTEE_t = Debt service change at time (dependent variable)

β_0 = Constant

β_1, β_2 and β_3

e_t = Stochastic error associated with the model.

Decision Rule:

Reject the null hypothesis, If the P-value is less than the significance level ($\alpha = 0.05$)

Priori Expectation

It is expected that debts coming from both externally and internally should have a positive and significant effect on the social infrastructure development of the country. The theoretical (a priori) expectations about the signs of the coefficients are as follows: $\beta_0 > 0, \beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 > 0, \beta_5 > 0, \beta_6 > 0$. It is expected that the sign of the coefficients of EDTEE, IDTEE and DSTEE

should be positive. This is because; an increase in the amount of EDTEE, IDTEE will lead to an increase in EDEE and EHTEE, except DSTEE.

DATA ANALYSIS AND RESULTS

TEST OF HYPOTHESES

Table 1: Pearson Correlation coefficient of Government Debt and Expenditure on Education

	VARIABLES	EETEE	EDTEE	IDTEE	DSTEE
Pearson Correlation	EETEE	1.000	.701	.490	.787
	EDTEE	.701	1.000	.341	.643
	IDTEE	.490	.341	1.000	.608
	DSTEE	.787	.643	.608	1.000

The table 2 above showed that the correlation coefficient between EDTEE and DSTEE are positive and strong relationship (0.701; 0.787), with the exception of IDTEE (0.490), which has moderate, respectively.

Table2: Regression analysis between the Government Debt and Expenditure on Education

Dependent Variable: EETEE
 Method: Least Squares
 Date: 10/06/23 Time: 19:46
 Sample: 1 20
 Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.132182	0.028599	-4.621930	0.0003
EDTEE	0.163238	0.051423	3.174411	0.0059
IDTEE	0.043553	0.056961	0.764607	0.4556
DSTEE	0.500242	0.052952	9.447129	0.0000

R-squared	0.955450	Mean dependent var	0.308368
Adjusted R-squared	0.947097	S.D. dependent var	0.149726
S.E. of regression	0.034438	Akaike info criterion	-3.722464
Sum squared resid	0.018975	Schwarz criterion	-3.523318
Log likelihood	41.22464	Hannan-Quinn criter.	-3.683589
F-statistic	114.3828	Durbin-Watson stat	0.655522
Prob(F-statistic)	0.000000		

Source: E-view vr 8

The aforementioned table 2 demonstrated that, for the EDTEE, IDTEE, and DSTEE, respectively, the significance value for the estimated t-statistics ($t = 3.174411, 0.764607, \text{ and } 9.447129$) was > 0.05 level of significance employed for this investigation. The regression analysis coefficients, which are 0.163238, 0.043553, and 0.500242 and are shown in the table as the standardized coefficient, show that the dependent value tends to increase along with the value of the independent variable. With the exception of 0.4556 at 95% indicating significant 0.4556, $PV = 0.0059$ and $0.0000 < 0.05$. According to $AdjR^2$, independent variables explain 94.7% of the

variation in EETEE, and about 5.3% of the effect is accounted for by other variables. The overall goodness of fit of the regression model is 0.000000, which indicates that it is statistically positive and significant ($F = 0.000000 < 0.05$).

We therefore accept the null hypothesis and draw the conclusion that, with the exception of IDTEE, EDTEE, and DSTEE have a considerable beneficial impact on EETEE in Nigeria. Serial correlation in the residual was shown by the DW stat value of 0.655522.

Table 3: Pearson Correlation coefficient of Government Debt and Expenditure on Health

	VARIABLES	EHTEE	EDTEE	IDTEE	DSTEE
Pearson Correlation	EHTEE	1.000	.268	.120	.514
	EDTEE	.268	1.000	.341	.643
	IDTEE	.120	.341	1.000	.608
	DSTEE	.514	.643	.608	1.000

Except for DSTEE, which has a significant and substantial association (0.514), the table 4 above showed anon-significant and weak positive correlation coefficient between EDTEE and IDTEE (0.268; 0.120).

Table 4: Regression analysis between the Government Debt and Expenditure on Health

Dependent Variable: EHTEE

Method: Least Squares

Date: 10/06/23 Time: 19:54

Sample: 1 20

Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.154469	0.044810	3.447180	0.0033
EDTEE	-0.026210	0.080572	-0.325299	0.7492
IDTEE	-0.114673	0.089250	-1.284859	0.2171
DSTEE	0.185590	0.082967	2.236908	0.0399
R-squared	0.624154	Mean dependent var		0.211719
Adjusted R-squared	0.611216	S.D. dependent var		0.059271
S.E. of regression	0.053959	Akaike info criterion		-2.824334
Sum squared resid	0.046585	Schwarz criterion		-2.625188
Log likelihood	32.24334	Hannan-Quinn criter.		-2.785459
F-statistic	2.308385	Durbin-Watson stat		0.603570
Prob(F-statistic)	0.115354			

Source: E-view vr 8

Table 5 above showed that the significance value for the calculated t-statistics ($t = -0.325299, -1.284859, \text{ and } 2.236908$) for the EDTEE, IDTEE, and DSTEE, respectively, was > 0.05 level of significance used for this inquiry. The regression analysis coefficients, which are shown in the

table as the standardized coefficient and have $PV = 0.7492$ and $0.2171 > 0.05$ with the exception of 0.0399 at 95% , are -0.026210 , -0.114673 , in tend to decrease along with EHTEE and 0.185590 increases EHTEE. $AdjR^2$ indicates that independent variables account for 61.1% of the variation in EHTEE and that other variables account for around 38.9% of the effect. The regression model's overall goodness of fit is 0.115354 , indicating that it is non-statistically significant ($F = 0.115354 > 0.05$).

IDTEE and EDTEE have a negative and non-significant impact on EHTEE in Nigeria, with the exception of DSTEE, thus we accept the null hypothesis and make that result. The residual showed serial correlation, as indicated by the DW stat value of 0.603570 .

DISCUSSION OF RESULTS

The aforementioned study results indicate that whereas EDTEE and IDTEE have positive and significant effects on educational expenditure, DSTEE has a favorable but non-significant influence. This result was consistent with that of Adegbe, Otolaiye, Agugom, and Ajayi (2022), who found that public debt management (RGDP) significantly and positively impacted Nigeria's economic growth. The findings of Ajah and Jacob's (2021) analysis corroborated the notion that Nigerian capital expenditure is significantly and favorably influenced by domestic debt. However, there is little correlation between Nigeria's capital expenditures and its external debt.

In addition, EDTEE and IDTEE—apart from DSTEE—have a negative and insignificant effect on health spending. The findings of Ani and Ngene's (2021) analysis contradict each other and show that Nigeria's debt has a favorable, non-significant impact on capital expenditure projects related to housing, power, agriculture, rural development, and transportation in Nigeria. While domestic debt has a beneficial long- and short-term influence on Nigeria's economic growth, external debt has a negative long- and short-term impact, according to research by Ajayi and Edewusi (2020).

This study's conclusion is that Nigeria's debt has a beneficial, significant impact on the educational sector, as evidenced by increases of 0.163238 , 0.043553 , and 0.500242 in debt service, respectively. On the other hand, the health sector's debt service increased by 0.1855910 and decreased by -0.026210 and -0.114673 , respectively, indicating that it wasn't getting enough money from debt collection.

SUMMARY OF FINDINGS

- There was positive ($Cf = 0.163238$) significant ($0.05 < 0.0059$) relationship between government external debt and expenditure on education in Nigeria while there was

negatively non-significant ($Cf = -0.026210$; $0.05 > 0.7492$) relationship between external debt and expenditure on health in Nigeria.

- Government internal debt has positive (0.043553) non-significant (0.4556) effect on expenditure on education in Nigeria and internal debt has negative (-0.114673) and non-significant (0.2171) effect on expenditure on health in Nigeria.
- Growth of Nigeria's expenditure on education was positively (0.500242) significant (0.0000) effect by debt service fees as well as expenditure on health ($Cf = 0.185590$; $0.05 > 0.0399$)

CONCLUSION

Based on the aforementioned data, the impact of government debt on the growth of Nigeria's social infrastructure was determined. It was found that there was a negative non-significant relationship between external debt and health expenditures in Nigeria, but a positive significant relationship between government external debt and education spending. Furthermore, internal debt held by the government has a negative but non-significant impact on health spending in Nigeria and a positive but non-significant influence on education spending. Debt service fees and health expenditures had a favorable and considerable impact on the growth of Nigeria's education spending.

Implications

The result implies that the education and health sectors—which would expand the economy by advancing humankind—was not enough devoted to the collection of debt from both internal and foreign sources. Meanwhile, the amount of debt services continues to rise.

Recommendations

In light of the studies' negative and non-significant results, the study's recommendations and conclusion suggest that no debt be taken on; in the alternative, the following should be preserved for economic growth.

- In order to guarantee that the education sector receives accurate funding allotted, policymakers should develop and put into effect suitable policies that will make the money allocated to it transparent.
- The government should make sure that only authentic medications and equipment are purchased and maintained, and health officer staff members should be motivated to carry out their duties with efficacy and efficiency. Doing so will significantly boost the amount of health development in the nation and raise productivity.
- Politicians and other policymakers must make sure that Nigeria's debt is not taken on for personal gain or political gain, but rather to boost the country's economy and guarantee that loan payments are made on schedule and in full.

Contribution to Knowledge

This study, which examines the effect of government debt on the development of social infrastructure in Nigeria, adds to the body of knowledge on the subject of social infrastructure development by highlighting the underutilized sectors of the health and education systems and educating Nigerians about the management of social infrastructure development loans.

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