



An Assessment of the Effect of External Debt on Sustainable Infrastructural Development in Nigeria

ORILOYE GABRIEL LOLA, MICHEAL ABIODUN ONI.
Babcock University, Ilishan-Remo, Nigeria

Abstract. Sustainable investment in infrastructure requires a huge financial outlay. Resources scarce countries borrow to bridge their resource gap in order for them to develop their infrastructure. Thus, public borrowing provides a reliable way to finance government spending where available resources are insufficient. Nigeria is an experienced borrower from multilateral, bilateral, and private lenders in a bid to fill its infrastructural gap. As of 2021, Nigeria's external debt stood at US\$39.5 billion. Despite the loans contracted over the years, there is an observed gap between her accumulated external debt and the level of infrastructural development available to the citizens. The study, therefore, investigated the effect of external debt on sustainable infrastructural development in Nigeria. The study employed a mixed-methods design. For the purpose of credibility and validity of the findings, the triangulation technique was adopted. The population of the study was 532, drawn from Public Debt Management=142, Fiscal Responsibility Commission=110, and Central Bank of Nigeria=280. The sample size of the study was 228 using the Taro Yamane sample size determination formula. The study employed structured questionnaires and interviews as its data collection instruments. The questionnaire and interview schedule were subjected to a validation process of face and content validity. A pilot study was conducted involving 10% of the respondents who were randomly selected from the Ogun and Kwara states' ministry of finance to determine the instruments' reliability. The Cronbach's Alpha values 0.758 and 0.842 were obtained and which indicated a high level of internal consistency of the scales. Data analysis was carried out with the aid of Inferential statistics and content analysis. The study found that external debt had no significant effect on sustainable infrastructural development in Nigeria ($\beta = 0.002$, $t(198) = 0.040$, $p > 0.05$). The study concluded that external debt had

no significant effect on sustainable infrastructural development in Nigeria. The paper recommended that the National Assembly and the Federal Ministry of Finance should ensure that external loans are tied to specific projects.

Keywords: External debt, Sustainable infrastructure, Gross domestic product, Productive investment.

1. Introduction

Sustainable investment in infrastructure requires a huge financial outlay. Resources scarce countries borrow to bridge their resource gap in order for them to develop their infrastructure. Thus, public borrowing provides a reliable way to finance government spending where available resources are insufficient.

Governments across the world need huge financial resources to meet these obligations. This includes the provision of public goods that improve citizens' overall quality of life. The provision of quality public infrastructural facilities offers an avenue for citizens to create wealth and contribute meaningfully to economic prosperity. This is the first and most important step in achieving sustainable development goals. The government also has obligation to sustain the development created by the citizen as a result of their entrepreneurship through appropriate legislation to regulate socio-economic activities.

Since the outbreak of the coronavirus pandemic in 2020, the world has witnessed phenomenal growth in global public debt. This surge was a result of the economic recession induced by the pandemic which forced governments around the world to provide unprecedented bailouts to private sector industries. Developed economies such as Japan, the US, Germany, and the UK all ran deficit budgets in a bid

to spend their ways out of the recession caused by the global pandemic.

Predictably, Africa was not excepted from the surge. According to a world bank data, public debt across the continent grew from US\$350billion in 2010 to US\$702 billion in 2021. Countries across Africa sub region spent almost 20% of their income on debt service despite the raging public health emergency and the attendant economic recession (IMF, 2020) Increasing public debt levels have grave consequence for debt service cost. Three key drivers are responsible for this upsurge in debt level across Africa. This includes: the frequent devaluation of the local currency against globally traded currencies like US Dollar, Euro and others, growing interest costs, and increasing deficit financing. Strong economic performance in some of these countries in the last decades has helped to slow down the noticeable upward trend in the debt-to-GDP ratio, but the overall growth in public debt has been much evident due to mounting interest payments. According to a world bank survey, most African countries suffer from insufficient infrastructures such as poor road networks, unstable electricity, insufficient transportation network, to name a few. Nigeria, Angola and Ghana are somewhat responsible for the high incidence of debt-to-GDP levels across the continent (Sow, 2018).

According to Ojekunle (2021) Nigeria's public debt reduced significantly between 1999 to 2007 due to the Paris Club's debt cancellation in 2005, Nigeria has rapidly amassed over US\$39.7 billion as of December 31st 2021.

While increase in public borrowing enables the government to have access to extra resources, Nigerians are generally worried about the level of public debt vis-a-vis the level of infrastructural development in the country.

In view of the widening gap in the loan taken and the available public infrastructure in Nigeria, the objective of the paper is to measure the effect of external debt on sustainable infrastructural development in Nigeria between 2011 and 2021.

2. Literature Review and Hypothesis Formulation

2.1 Conceptual Clarification:

2.1.1 External Debt

The sources of external debt may be bilateral, multilateral, or commercial lending institutions. This includes debts owed to international or foreign

nations (Arnone & Presbitero, 2005). The government borrows from sources external to the country when internal funding sources are not enough to meet its funding requirement. Gbosi (2015) described external borrowing as when a sovereign entity obtains a loan from resources external to its sovereign control. The overall intention may be to invest in programs that can improve the quality of life of its citizenry. Tom-Ekine & Nnadede (2012), submitted that the provision of socio-economic necessities to the citizens of a country often leads to external borrowing when there is a shortfall in the internal resources. These necessities may include the provision of good roads, health facilities, and education.

Furthermore, an external borrowing scenario occurs when a sovereign borrows in another country's currency from a non-resident creditor. Todaro and Smith (2011) suggested that foreign debt is the sum of a country's total indebtedness to outside sources notwithstanding the classification of such debt. Ajie, Akekere & Ewubare (2007), conceptually clarified that external debt is the unpaid share of external resources obtained to finance development projects and matured current account deficit. Simply put, external debt is a country's debt to countries and institutions outside its monetary system, that is, to outside creditors. Overtime, such debt will constitute a huge drain on national resources due to interest and principal repayment.

External resource is used to fast-track development pace beyond what the available resources can finance at a given time. Some critical national assets such as the Kainji Dam, and others were financed with loan proceeds. Umo (2012) advocated that debt accumulation process enhances public sector capital formation. Borrowing hugely enhances capital investment which in turn fast track the development of the economy and sets it on the path to sustainable infrastructural development through the multiplication of wealth. For example, the Lagos' third mainland bridge was constructed with a £10 million loan. This subsequently opened up one of the most viable sub national economies in West Africa. Thus, external borrowing has the potential to accelerate the development of infrastructure or hurt the country's economy. This depends on the utilization of the loan proceeds.

Historically, Nigeria has a rich experience in the external debt market. This is because foreign loan is part of her colonial past. It was documented that Nigeria took a \$28 million loan from the Italian government in 1958 to finance the construction of a

rail line. Foreign debt was however kept nominally low in the years that followed political independence. This period span 1960 to 1977. Reason for this can be attributed to the oil boom of the period. This is partly because of the oil revenue surplus and the fact that debts were generally obtained during this period from bilateral/multilateral sources that has longer maturity of at least 10 years period and much lower interest rate. In addition, debt servicing was not an issue because of the booming oil revenue. Conversely, sustained fall in the prices of oil and other commodities in the global oil market in 1978 and beyond forced the government to turn to foreign loans to finance capital projects.

Growth in public expenditures, expensive borrowing at non-concessional rates, reduction in oil receipts, the incidence of trade arrears was identified as factors responsible for the astronomical growth in external borrowing (Gbosi, 2015). The problem of external debt was also caused by the fact that Nigeria contracted some loans that were project-tied without comprehensive consideration for their long-term economic benefit. Moreover, some of these loans had short maturity periods and were obtained mostly from private sources to finance projects with long maturation periods. As such, there was a matching problem from the inception of the project. Matching loan maturity and repayment source is very importance in public finance. This is essentially critical in order to avoid putting too much pressure on the fiscal system.

The loan defaults of the 1980s and the 1990s culminated in a globally coordinated debt relief that was granted by the creditors at the beginning of this century to poor countries. This largess was necessary because it was impossible to fund new public investment in public infrastructure at the time. Tom-Ekine (2014) attributed the poor investment and lack of development during this period to the extreme indebtedness of poor countries such as Nigeria to their heavy external debt burden. The fact that enormous resources were devoted to servicing these debts in order to avoid a default scenario with its devastating consequence for the economic prosperity of the defaulting nation and credibility in the international debt market. Therefore, Nigeria like any other sovereign entity has a sacrosanct responsibility to manage its external debt portfolio in a cautious and efficient manner.

Over the past decades, Nigeria has adopted several internationally recommended public debt management strategies in order to cut her external debt burden with a view to achieving sustainable infrastructural development. These approaches

include debt rescheduling, debt conversion or liquidation management, embargo or limitation on new loans. Literature revealed that despite these strategies. The intended result or goal has not been achieved. This is because foreign debt has continued its upward trend since independence. Ekperiware & Oladeji (2012) lamented that decades after the debt reprieve, key sectors of the Nigerian economy like power, education, and health are supposed to show the benefits of the debt cancellation. Buttressing this point, some studies have found no commensurate connection between debt relief and sustainable economic development. Despite the whooping debt forgiveness from Paris Club, the hope of rapid infrastructural development remains a mirage about twenty years later.

By the same token, Ayodele (2012) noted that in spite of the 2005 debt forgiveness from the Paris club of creditors, Nigeria's debt has quickly grown to a staggering sum of \$95.7 billion which comprises US\$38.3billion and US\$57.3billion respectively. Nigeria's external debt was \$10.32 billion as of June 2015, but by December 2021, it had strangely grown to US\$39.7 billion. Nigeria has been on a borrowing binge since 2015. In 2021 alone, Nigeria grew its debt burden by over US\$5 billion. The implication is that resources that could have been used to build sustainable infrastructures are needlessly diverted to service external loans.

The researcher believed that increase in external loan stock should lead to increase in industrialization because development projects are financed at a faster rate, social and economic facilities such as health, education, transportation, communications, electricity, sanitation and water supply, and many more should improve because of the additional resources. (Ajudua & Davis, 2015). Governments around the world take external loans to improve the living standard of their citizens through investment of capital on ventures that can fast track sustainable development of their economies. Thereby enabling individual citizens to create wealth. External debt usually takes the form of a 'tied loan', which means the funds secured through the loan must be spent in the nation that is providing the loan by way of paying for the material and technical resources needed for the project and must be tied to a specific project in the borrowing country.

For instance, resources for such projects are usually bought from the country that provides the loan. Reasons for this may not be unconnected with the need for monitoring, evaluation, accountability and transparency in the loan disbursement and utilisation.

Tied loans, like the Chinese loans under the birth and road initiative (BRI), are always for specific purposes which are usually jointly defined by the borrowing and the lending nations. Chinese loans and loans from other bilateral institutions have been used to finance different projects across Nigeria. Although scholars believe that justifiable public borrowing is good for the economy and helps to sustain economic development. Nigeria's experience is however uniquely different because of the inverse relationship between the level of public borrowing and the appalling infrastructural gap in the country (Adetunji, 2017). Nigeria's external debt as of December 31st, 2021 according to the debt management data was US\$38.3 billion (DMO, 2021). Breakdown of Nigeria's external debt is presented below:

However, when the volume of external borrowing outweighs public revenue, it will undermine the economy and defeat the aims of the borrowing or the anticipated benefit. As a result, external loans need to be prudently contracted and thoughtfully utilised.

2.1.2 Sustainable Infrastructural Development

Infrastructure is a critical key driver for achieving sustainable development vision 2030 is considerably dependent on the development of sustainable infrastructures, such as public investment in public projects such as air transport, power stations, public schools, gas pipeline, hospitals, rail networks, bridges and roads and others (Udeh, Ugwu & Onwuka, 2016). Nkechi & Onuora (2018) postulated that the infrastructure of a country involves the reasonably permanent and foundation capital investment of a country and private firms enable its economic activities.

These include electricity, transportation, telecommunication, and other amenities necessary for the orderly administration of the state. Methodical borrowing enables the economy to grow at a faster rate because it allows the state to access extra resources and thereby creates an enabling environment for sustainable economic development. This is perhaps the most important role of government in creating sustainable infrastructural development. Citizens' living conditions are improved when an enabling environment is created through the provision of necessary infrastructure in an economy.

A well-utilized external borrowing increases productive investment in the infrastructure of a state. This has both short- and long-term effects. The direct implication is that it increases the internally generated revenues of a state because it stimulates economic activities whose impact is felt in the short

run via improvement in the revenue of the state. The development of sustainable infrastructure is very crucial to the continued health of an economy. Akpan & Nwanseh (2013) asserted that infrastructure is the vital oil that propels the wheel of development of a country's economy. Consequently, there can be no development without the availability of a certain level of public infrastructure.

These Infrastructures include good road networks, access bridges, stable electricity supply, and others. Hence, sufficient revenue generation and collection are vital to the provision of sufficient and sustainable public infrastructural development (Nkechi & Onuora, 2018). However, for developing countries, external debt poses major challenges, particularly in the context of fluctuating foreign exchange rate regimes to the provision of adequate public infrastructure (Uguru, 2016). This is because the maintenance and servicing of external debts ultimately require sufficient income to be able to honour matured obligations -interest and the principal. Emphasizing the need for sustainable infrastructure is not enough. Such emphasis must be accompanied by the availability of sufficient revenue. Due to the huge financial outlay required, a considerable amount of time is needed to plan and execute them. Government projects are either financed via externally generated or internally generated revenue.

The external source of revenue to the government includes grants and aids, individual corporate donations, public borrowing (domestic and Foreign) e,tc. During the oil boom, the Nigerian government depended exclusively on revenue generated from oil sales to solve most of its fiscal needs. This reliance on oil revenue changed with the instability experienced in commodities prices starting from the late 1970s to date.

2.2 Theoretical Framework

2.2.1 Debt Overhang Theory

The theory gained global popularity following the work by Krugman (1988) even though debt overhang theory was first propounded in 1977 by Stewart Meyer. The theory states that when an entity's debt is too large, a time will come when such entity will not be able to take on new debt to fund new project. Debt overhang reveals a state of affairs in which a country's debt becomes disproportionately huge beyond what the country can repay (Burhanudin, Muda, Nathan, & Arshad, (2017). Debt overhang theory is widely applied to the understanding of public debt and its implication for an economy. It implies that uncontrolled borrowings

lead to high public debt and can compromise the ability of the economy to generate enough resources for its repayment. Its relevance to this study lies in its ability to show the danger of growing external public debt at the expense of the overall health of the Nigerian economy. Krugman (1988) argued that if the possibility exists that the public debt of a country will be larger than what the country can repay, the cost of servicing the debt will slow down investment regardless of if it is foreign or local. This is because it will discourage investors due to the fact that high public debt burden ordinarily attracts higher tax bills from the government to honour their repayment obligation, and thus, high debt incidence discourages investment in an economy in the long term.

2.3 Research Hypothesis

Ho1: External debt has no significant effect on sustainable infrastructural development in Nigeria.

2.4 Research Method

This study adopted a mixed-method research design to strengthen and expand the study’s conclusions thereby addressing the research objective.

3. Result and Discussion

The population of the study comprised employees from the Debt Management Office, Central Bank of Nigeria and Fiscal Revenue Commission with a numerical population of 532. The justification for these two agencies of government was because they have primary responsibility for managing Nigeria’s external debt. Specifically, The CBN has a population of 280, DMO has population size of 142 while FRC was 110 respectively.

Sample size was determined using Taro Yamane (1967). The sample size was 228. The paper adopted multistage random sampling technique to access senior employees from these agencies. Structured questionnaire was self-developed and validated. Interview was used to support the survey method. Cronbach’s Alpha reliability coefficient range from 0.758to 0.842. The response rate of 90.9% was achieved. Data were analyzed through inferential statistics and content analysis.

Research objective One: the effect of external debt on sustainable infrastructural development in Nigeria.

The quantitative analysis of the data and interpretation of the respondents' responses to the question on the effect of external debt on sustainable infrastructural development in Nigeria is presented below.

Statements	SA	A	U	D	SD	Mean	Remark
	5	4	3	2	1	STD	
Loans will solve future infrastructural problems	15	14	25	79	67	2.16	Disagree
	7.5	7.0	12.5	39.5	33.5	1.182	
The benefit of external debt to the citizens is more than the burden of repayment	2	48	13	52	85	2.15	Disagree
	1.0	24.0	6.5	26.0	42.5	1.235	
External debt have improved the quality of life	19	34	37	49	61	2.51	Undecided
	9.5	17.0	18.5	24.5	30.5	1.334	
External loans have helped fast track the pace of investment in public infrastructure	6	55	29	45	65	2.46	Disagree
	3.0	27.5	14.5	22.5	32.5	1.279	
Loans have improved infrastructure	19	50	31	25	75	2.57	Undecided
	9.5	25.0	15.5	12.5	37.5	1.441	
Borrowed money solves the problems of infrastructure	22	46	7	61	64	2.51	Undecided
	11.0	23.0	3.5	30.5	32.0	1.421	
Loans achieve the purpose of creating meaningful jobs	18	48	49	44	41	2.79	Undecided
	9.0	24.0	24.5	22.0	20.5	1.266	
Needed resources for other sector is not affected by ongoing borrowings	22	41	8	49	80	2.38	Disagree
	11.0	20.5	4.0	24.5	40.0	1.455	

Source: Field Survey Results, 2021

Table 1.0 shows the effect of external debt on sustainable infrastructural development in Nigeria. It was revealed that 7.5% of the respondents strongly agreed that Loans will solve future infrastructural

problems, 7.0% of the respondents agreed, 12.5% were undecided, 39.5% of the respondents disagreed and 33.5% of the respondents strongly disagreed. On average, the respondents disagreed that external loans

will solve future infrastructural problems (Mean = 2.16, STD = 1.182). Further, 1.0% of the respondents strongly agreed that the benefit of loans to the citizens is more than the burden of repayment, 24.0% of the respondents agreed, 6.5% were undecided, 26.0% of the respondents disagreed and 42.5% of the respondents strongly disagreed. On average the respondents disagreed that the benefit of loans to the citizens is more than the burden of repayment (Mean = 2.15, STD = 1.235). In addition, 9.5% of the respondents strongly agreed that Loans have improved the public infrastructure, 17.0% of the respondents agreed, 18.5% were undecided, 24.5% disagreed and 30.5% strongly disagreed. On average the respondents were undecided that Loans have improved public infrastructure (Mean = 2.51, STD = 1.334). The table reveals further, that 3.0% of the respondents strongly agreed that public loans have helped fast track the pace of investment in public infrastructure, 27.5% of the respondents agreed, 14.5% were undecided, 22.5% of the respondents disagreed and 32.5% of the respondents strongly disagreed.

On average the respondents disagreed that public loans have helped fast track the pace of investment in public infrastructure (Mean = 2.46, STD = 1.279). Also, 9.5% of the respondents strongly agreed Loans have increased revenue, 25.0% of the respondents agreed, 15.5% were undecided, 12.5% of the respondents disagreed and 37.5% of the respondents strongly disagreed. On average the respondents were undecided that Loans have increased revenue (Mean = 2.57, STD = 1.441). From the analysis, 11.0% of the respondents strongly agreed that borrowing money solves the problems of social amenities, 23.0% of the respondents agreed, 3.5% were undecided, 30.5% of the respondents disagreed while 32.0% of the respondents strongly disagreed. On average, the respondents were undecided whether borrowed money solves the problems of infrastructure (Mean = 2.51, STD = 1.421). In addition, 9.0% of the respondents strongly agreed Loans achieve the purpose of creating meaningful jobs, 24.0% of the respondents agreed, 24.5% undecided, 22.0% disagree, 20.5% strongly disagree.

On average the respondents were undecided whether external loans achieve the purpose of creating meaningful jobs (Mean = 2.79, STD = 1.266). The findings revealed further that 11.0% of the respondents strongly agreed that Needed resources for other sectors are not affected by ongoing borrowings, 20.5% of the respondents agreed, 4.0% were undecided, 24.5% disagreed and 40.0% strongly

disagreed. On average the respondents were undecided that needed resources for other sectors are not affected by ongoing borrowings (Mean = 2.38, STD = 1.455).

The interviewees chorused that “external debt is a “curse on Nigeria”, “a big problem”, “will sink Nigeria” and so on. Some interviewees explained that “external debt has not contributed positively to infrastructural development in Nigeria. They further stated that the claims that it has helped in building physical infrastructure is not true” The money borrowed is not a gift; it is a loan that must be paid back with exorbitant interest. Unfortunately, the money spent on repaying the loan in some instances is more than the actual money borrowed. Another interviewee quipped why we continue borrowing. In support of this argument, three of the interviewees countered that note that Nigeria’s growing external debt makes no sense. When considered against “the huge infrastructural gap and the accumulated debt”, the government’s assertion that Nigeria needs to continue borrowing to develop its infrastructures will eventually lead the country to a debt crisis like what she suffered back in late 1980s and late 1990s.

In an interview, Sherifdeen (2022) argued that since the resources raised through tax and other sources are not utilised properly, it is difficult for the government to suddenly master how to utilise loan properly. Despite the claims by the government that borrowed resources have improved its public infrastructures, this claim is far from realities as public data tells a different shocking story of dilapidation and despair in public infrastructures. In fact, excessive borrowing has restricted economic growth and become the biggest drawback for the economy.

Another interviewee lamented that the government’s claim that it borrows to accelerate the pace of investment in public infrastructure and to enhance the quality or standard of life of the citizens is weak and unconscionable. The actual reason behind government’s borrowing is because of the insatiable appetite of the political elite. They prefer personal aggrandizement to the development of basic infrastructures that can engender a sustainable growth in economic prosperity and development of the country and the quality of life of the citizens. Another interviewee declared that ultimate beneficiary of Nigeria’s external debt is somehow connected to the individuals in government.

Majority of the interviewees cited the deplorable state of roads in Nigeria as the main reason for their conclusion that external debt has no commensurate

relationship with sustainable infrastructural development in Nigeria.

Findings from the analysis of the quantitative data and findings from the interview point out that external debt has no significant sustainable infrastructural development in Nigeria. The results of the descriptive analysis of the quantitative data on the effect of external debt on sustainable infrastructural development in Nigeria showed that the mean value for the responses on the rationale for external loan contracting in Nigeria ranges from 2.15 to 2.79. Also, it was observed that about half of the responses were undecided and about the same half believed that external debt affects sustainable infrastructural

development in Nigeria. The standard deviation ranges from 1.182 to 1.445 indicating a huge difference in how they responded.

The findings from the interview section support these findings. Interviewees believed that infrastructural facilities built with loans proceeds may have been used to target growth in economic activities in some sectors, however, the possibility that such activities lead to more jobs and creates enough income to pay back in the foreseeable future is absent. Overall, the findings showed that external debt has no significant effect on sustainable infrastructure development. This finding provides an answer to research question four.

Restatement of the Hypothesis

H01: external debt has no significant effect on sustainable infrastructural development in Nigeria. Hypothesis one was tested using simple regression analysis. Data for external debt and sustainable infrastructural development was used in the analysis. The results of the analysis are presented in Table 1.1:

Variables	B	T	Sig	R	R2	Std. Error of the Estimate
Constant	23.867	16.104	.000	.003a	.000	3.8111
External debt	.002	0.040	.968			
a. Dependent Variable: sustainable infrastructural development			F (1,199) = .002			

Source: Researcher’s Field Results (2021)

The result revealed that ($\beta = 0.002$, $t(198) = 0.040$, $p > 0.05$). The slope coefficient was .003. It represents the strength, amount of change and direction of the relationship between external debt on sustainable infrastructural development in Nigeria. The correlation coefficient reveals that there is no relationship between external debt and sustainable infrastructural development in Nigeria. The findings indicated that external debt does not affect sustainable infrastructural development in Nigeria. Hence, external debt has no significant effect on sustainable infrastructural development in Nigeria. Thus, consideration should be given to any other way of building infrastructure.

Furthermore, the result indicated that external debt explains 0.0% of the variations that occur in sustainable infrastructural development in Nigeria. ($R^2 = 0.000$). The result revealed that the model was statistically not significant. This was supported by the $F(1,199)$ statistics of .002 and the reported p-value (0.968) which is less than the conventional probability of 0.05 significance level ($t(198) = 0.040$, $p = 0.968$). This shows that the p-value for the analysis was reported to be more than the alpha benchmark of 0.05 thus implying that the analysis is

not statistically significant. On that basis, null hypothesis two is accepted and we conclude that external debt has no significant effect on sustainable infrastructural development in Nigeria.

These findings yielded an optimal regression model for statistically significant construct shown below:
 $SID = 23.867 + 0.002SLC$ eq. 5.2

Where:
 ED = External Debt
 SID = Sustainable Infrastructural Development

The model, shown above indicated a constant parameter value of 23.867, which implied that external debt when at constant zero, sustainable infrastructural development in Nigeria would be 23.867 which is positive. Furthermore, the results revealed that unit change in external debt would lead to 0.002 change or increase in sustainable infrastructural development. The results revealed that external loan contracting has no significant effects on sustainable infrastructural development in Nigeria. Based on the F statistics and coefficient of determination with a p-value more than the

conventional probability of 0.05, the null hypothesis (H01) was hereby accepted.

4. Discussion of Finding

Findings on this objective indicated that the items on the effect of external debt on sustainable infrastructural development had no significant effect on sustainable infrastructural development in Nigeria. The finding supports the work of Calderon & Serven (2010) cited in a 2020 World Bank report that concluded that public infrastructure networks remain poor in Sub-Saharan Africa despite huge external debt allegedly incurred to improve them. Ajakaiye & Ncube (2010) asserted further the presence of a wide gap in infrastructure provision, especially in Nigeria where public officials characteristically borrow to finance public infrastructure. An Africa development bank survey of public infrastructure index in 2015 ranked Nigeria's infrastructure 23rd in Africa out of the 53 African countries surveyed. However, the 2020 edition of the survey showed that Nigeria had receded to the 24th position from where it was in 2015. Nigeria's external debt has risen from \$10.7 billion in 2015 to \$38.3 billion in 2021.

The researcher agrees with this empirical reality bearing in mind the deplorable state of electricity supply, road network, and nonexistence water and sanitation system in Nigeria, this period, however, has seen one of the most dramatic rises in both domestic and external debt in Nigeria debt without commensurate effect on sustainable public infrastructure. The findings of the study agree with Ifeanyi and Earnest (2016) and Ndubuaku, Uche, Onwuka, & Ifeanyi (2021) conclusions that external debt has not made a positive contribution to Nigeria's sustainable physical infrastructure.

Therefore, Nigeria's mounting external debt profile since 2011 is unjustifiable, irresponsible and uncalled for. Ugwu and Nzewi (2016) cautioned that foreign loans should only be embarked on when it is inevitable and the proceeds should be invested in productive economic activities and not fund consumption. As a result, the productive economic benefits of the loan will be more than the cost of servicing the debt which will ultimately bring sustainable infrastructural development. The N27.2 billion accumulated by the Nigerian government between 2015 to 2021 did not show any important yield in terms of improvement in the country's infrastructures nor the much desired fiscal and monetary market stability.

Furthermore, Ogunmuyiwa (2011) corroborated the finding of the study by noting that the relationship between external debt and economic development in Nigeria could not be proven because there is no significant relationship between the two variables. However, the study disagreed with findings from previous studies that either state that a positive or not so negative relationship exists between foreign debt and economic development. These scholars include Ahmed and Shakur (2011), Ezeabasili, Isu, & Mojekwu (2011), Oyovwi, & Eshenake (2013).

Theoretically, the finding of this study supports the submission of the Debt Overhang Theory. Based on the proposition that sooner a country's current borrowing rate if not checked may exceed her ability to repay. It, therefore, follows that a sovereign country that finds it difficult to service her loan may attract negative perceptions that defaulting countries face. Trust is an important aspect of lending and a country that defaults might find its future access to credit constricted. It could also find its assets in foreign countries seized. There is also a present danger this unrestricted borrowing may cause Nigeria. Every possibility points directly that continuous borrowing may threaten present direct investment into Nigeria. Investors will be discouraged on the basis that the higher the public debt, the higher they will be taxed by the government to repay the public debt and thus they will be less willing to incur investment costs today for the sake of increasing future output.

The present study supports these propositions. Hence, this study revealed that external debt may be far injurious not only to sustainable infrastructural development but may endanger the future of the next generation's ability to pursue fresh loans when needed. As an alternative to frequent external borrowings from the international community any time the government needs to execute a capital-intensive project, such projects can be funded by increasing the country's export earnings capacity. Export earning capacity can be increased through deliberate and strategic export growth policy as well as aggressive investment in human capital development as an alternative to frequent external borrowing. This comes with huge cost implications for the economy such as long-term fiscal instability, and the slow pace of investment in public infrastructure arising from huge debt service costs.

5. Conclusion

In this paper, we have presented data on the effect of external debt on sustainable infrastructural

development in Nigeria. We analyzed the consequence of Nigeria's external debt on its infrastructural development. To drive home the objective of this study, we have complemented the quantitative data with the data obtained from the interview. We also showed that the citizens do not derive the expected benefits from the country's borrowing from external sources.

Based on the findings of the study, the study concluded that external debt has no significant effect on sustainable infrastructural development in Nigeria as the finding showed. This is because Nigerians are yet to experience the expected improvement in their quality of life as a result of the mounting external loan. The study further concluded that placing a moratorium on future external loans will enable Nigeria to fix its fiscal policy problems by harnessing its resources to fund its infrastructure needs internally.

6. Recommendation

The paper recommendation below is based on the findings of the paper:

The National Assembly and the Federal Ministry of Finance should ensure that external loans are tied to specific projects during the loan approval and post-approval period, periodic assessments should be jointly carried out to evaluate the level of work done and the fund disbursed. This will ensure that deficit financing is infrastructure tied. It will also ensure that external loans have the desired effect of sustainable infrastructure.

References

- Adetunji, A. (2017). A Comparative Analysis of the Control of Financial Crime from the Perspective of the UK, USA and Nigeria (Doctoral dissertation, School of Advanced Study, University of London).
- 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*.
- Ajudua, E. I., & Ojima, D. J. P. (2015). Government expenditure, foreign direct investment and economic growth in Nigeria. *Journal of Economics and Sustainable Development*, 6(8), 7984.
- Ajie, H.A., Akekere, J., & Ewubare, D.B. (2007). *Issues in Macroeconomics*. Port Harcourt, Nigeria: Pearl Publishers
- Arnone, M., & Presbitero, A. F. (2005). Sustainability and External Debt Reduction in Poor Countries. *Catholic University of Piacenza Economics Working Paper*, (27).
- Ayodele, T.D. (2012). Nigerian Debt Burden and the Bogey of Debt Serving. *Journal of Management and Corporate Governance*, 4, 41-46
- Ajakaiye, O., & Ncube, M. (2010). Infrastructure and Economic Development in Africa: An Overview. *Journal of African economies*, 19(suppl_1), i3-i12.
- Amadeo, K & Boyle, M. J., (2021). Thebalance.com. Retrieved on May 15, 2021, from <https://www.thebalance.com/what-is-economic-growth-3306014>
- Ahmed, M., & Shakur, M. (2011). Debt (a real hurdle in the economic growth of Pakistan): A time series analysis. *African Journal of Business Management*, 5(28), 11532-11538.
- Ajie, H.A., Akekere, J., & Ewubare, D.B. (2007). *Issues in macroeconomics*. Port Harcourt, Nigeria: Pearl Publishers
- Arnone, M., & Presbitero, A. F. (2005). Sustainability and External Debt Reduction in Poor Countries. *Catholic University of Piacenza Economics Working Paper*, (27).
- Ayodele, T.D. (2012). Nigerian Debt Burden and the Bogey of Debt Serving. *Journal of Management and Corporate Governance*, 4, 41-46
- Ekperiware, M.C. & Oladeji, S.I. (2012). External Debt Relief and Economic Growth in Nigeria. *American Journal of Economics*, 2(7), 195-205.
<http://journal.sapub.org/economics>
- Debt Management office, (2021). Nigeria's total public debt portfolio as at December 31, 2021 Retrieved from <https://www.dmo.gov.ng/debt-profile/total-public-debt/3591-nigeria-s-total-public-debt-stock-as-at-December-31-2021/file>.
- Gbosi, A.N. (2015). Contemporary Macroeconomic Problems and Stabilization Policies, 2nd Edition. *Benin City: Spirit and Truth Publishers*.
- Tom-Ekine, N., & Nnadede, S. O. (2012). Exchange rate of the naira and the structure of Nigeria's external trade. *International Journal of Educational Development* (Ijoed), 32.
- Todaro, M.P. & Smith, S.C. (2011). *Economic development* (11th Ed), *England: Pearson Education Limited*
- Umo, J. U. (2012). Escaping poverty in Africa: A perspective on strategic agenda for Nigeria.

- Tom-Ekine N., (2014). Macroeconomics: Dimensions of Competitive Indicators and Policy Performance. *Port Harcourt: Dominus Printing Company*.
- Ekperiware, M.C. & Oladeji, S.I. (2012). External Debt Relief and Economic Growth in Nigeria. *American Journal of Economics*, 2(7), 195-205. <http://journal.sapub.org/economics>
- Debt Management office, (2021). Nigeria's total public debt portfolio as at December 31, 2021 Retrieved from <https://www.dmo.gov.ng/debt-profile/total-public-debt/3591-nigeria-s-total-public-debt-stock-as-at-December-31-2021/file>.
- Block-Lieb, S., & Weidemaier, W. M. C. (2019). Lenders' roles and responsibilities in sovereign debt markets. *U. Ill. L. Rev.*, 1589.
- Calderón, C., & Servén, L. (2010). Infrastructure and Economic Development in Sub-Saharan Africa. *Journal of African Economies*, 19(suppl_1), i13-i87.
- Carruthers, B. G. (1991). State building and market-making: The politics of public debt in the *English financial revolution, 1672-1712* (Doctoral dissertation, The University of Chicago).
- Debt Management office, (2020). Nigeria's total public debt portfolio as at December 31, 2020 Retrieved from <https://www.dmo.gov.ng/debt-profile/total-public-debt/3591-nigeria-s-total-public-debt-stock-as-at-December-31-2020/file>.
- 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),
- Abuzaid, L. E. M. (2011). External Debt, Economic Growth and Investment in Egypt, Morocco and Tunisia (DoctoralDissertation, University of Gloucestershire).
- International Monetary Fund and World Bank, (2020). *Collateralized Transactions: Key Considerations for Public Lenders and Borrowers*. Washington, DC: IMF.
- Ifeanyi, A. L., & Ernest, C. (2016). Effects of Government's borrowing on Nigerian infrastructural development. *Euro-Asia Journal of Economics and Finance*, 4(4), 93-112.
- Ifeanyi and Earnest (2016) and Ndubuaku, Uche, Onwuka, & Ifeanyi (2021)
- International Monetary Fund and World Bank, (2020). *Collateralized Transactions: Key Considerations for Public Lenders and Borrowers*. Washington, DC: IMF.
- Mixon, F. G., & Shaw Bridges, R. (2018). The lighthouse in economics: colonial America's experience. *Journal of Public Finance and Public Choice*, 33(1), 81-101.
- Mihalyi, D., Adam A., and Hwang J. (2020). *Resource Backed Loans: Pitfalls and Potential*. Report 27. New York: Natural Resource Governance Institute.
- Ota, E. F. (2020). public investment in infrastructure and economic growth in Nigeria (1980-2020). *Development*, 4(3), 1-22.
- Ogbeifun, M.I. (2007), The Politics of External Debt Relief: Nigeria's unique experience. *African Journal of Stability and Development*, 1(1), 12-15.
- Odubuasi, A, Uzoka, P & Anichebe, A, (2018). External debt and economic growth in Nigeria. *J. Account. Financ. Manag.*, 4(1), 98–108
- Oyovwi, O. D., & Eshenake, S. J. (2013). Financial Openness and Economic Growth in Nigeria: A vector error correction approach. *African Research Review*, 7(4), 79-92.
- Sow, M. (2018). Figures of the week: Africa's changing debt structure. Assessed from <https://www.brookings.edu/blog/africa-in-focus/2018/04/26/figures-of-the-week-africas-changing-debt-structure/>
- Shehu, U.H & Aliyu M. (2004) External debt and economic growth: Evidence from Nigeria. *Journal of Economics and Sustainable Development*.5(18).1-9
- Sheriffdeen, T. (2020 January 30a) People profiting from Nigeria's rising debts. Retrieved from <https://punchng.com/people-profiting-from-nigerias-rising-debts-prof-tella-economist/>
- Senibi, V., Oduntan, E., Uzoma, O., Senibi, E., & Oluwaseun, A. (2016). Public Debt and External Reserve: The Nigerian Experience (1981–2013). *Economics Research International*, 19(23), 1-8
- Ugwu, J. I., & Nzewi, U. C. (2016). An evaluation of the effect of external debt on economic growth indices in Nigeria. 156-170.
- Yamane, T. (1967). *Statistics: An Introductory Analysis* (No. HA29 Y2 1967).