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Role of Government Borrowing in Bridging Nigeria's Infrastructure Gap

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Abstract

Nigeria faces a significant infrastructure deficit that inhibits economic growth and development. Government borrowing has been a key strategy for financing infrastructure projects, given the limitations of domestic revenue generation. This paper examines the role of government borrowing in addressing Nigeria's infrastructure gap, analyzing its effectiveness, challenges, and long-term sustainability. The study adopts secondary data sources, including government reports, economic analyses, and academic literature, to provide a comprehensive overview of the subject.

Keyword: Economic Growth, Infrastructure, Domestic Revenue and Sustainability

Introduction

Infrastructure development is a vital key to economic progress, yet Nigeria struggles with inadequate roads, power supply, healthcare facilities, and other essential public services. Due to insufficient internally generated revenue and declining oil revenues, the Nigerian government increasingly relies on borrowing to finance infrastructure projects. However, concerns regarding debt sustainability and economic stability have fueled debates on the appropriateness of this approach. This paper explores how government borrowing leads to infrastructure development and assesses its implications for economic growth and fiscal responsibility.

It is commonly construed that the rationale for undertaking loans (both external and domestic) by countries, particularly developing countries, has always been to bridge the domestic resource gap in order to accelerate economic development (Sanusi, 1987 in Ayodele, 2012). To that extent, it would not appear absurd for any developing country like Nigeria resorting to borrowing, provided that the proceeds are utilized in a productive way that will contribute to the eventual servicing, liquidation of the debt and economic development of the debt or country. It is therefore generally expected that developing countries, facing scarcity of capital, will acquire debt (usually external debt) to supplement domestic savings (Pattillo, et al, 2002). The rate at which they borrow abroad and the sustainable level of foreign borrowing, depends on the links among foreign and domestic savings, investment, and economic growth. Therefore, a country should borrow abroad as long as the capital acquired produces a rate of return that is higher than the cost of the foreign borrowing. If this happens, the borrowing country is increasing capacity and expanding output with the aid of foreign savings.

Public debt is therefore that portion of the resources at the disposal of the federal government which was not generated by the government's revenue generation drive but was loaned from another party(ies) for the augmentation of the available resources needed for the nation's development or emergency attention. The term infrastructural development on the other hand is used to denote a state of improvement in the general status of the basic physical and organizational structures and facilities (e.g. buildings, roads, power supplies) needed for the operation of a society or enterprise. Hence, these basic physical and organizational structures and facilities as already exemplified are referred to as infrastructures. Thus, infrastructural development, as used in this study, typifies the provision, construction, improvement and rehabilitation of capital and productive projects like roads, airports, hospitals, education and research institutes, power development, human resources development, improved security, among others, in consonance with international standards.

However, countries of the world in general resort to borrowing at one time or the other to mobilize needed resources for some projects which they judge imperative for arousing developmental stride. Ezeabasili, et al (2011) opine that borrowing by countries occurs as a result of their inability to generate enough domestic savings to carry out productive activities. Such external borrowings by countries are meant to supplement the domestic savings and allow such countries to carry out productive activities. Thus, second and third world countries like Nigeria often embark on external aids and outright borrowings given that the independent resources at their disposal alone could hardly make significant impact in bringing about the kind of radical development in infrastructure needed to measure up with their 1st world counterparts.

Theoretical View

Debt Overhung Theory/Crowding out Effect

The literature presents both detrimental and beneficial effects of public debt (external debt in particular) on economic growth generally and infrastructural development in particular. Generally, public borrowing has been adjudged a veritable tool with which national governments (particularly developing nations) remedy their resource needs in order to accelerate economic development (Sanusi, 1987 in Ayodele, 2012). Proponents of this view focus their attention on the short-term effect of public debt as being capable of salvaging a drowning economy through the utilization of uneven endowment to exploit uneven investment opportunities, etc Arit (2013) defines debt overhang as a situation in which the expected repayment on external debt falls short of the contractual value of debt. The debt overhang theory states that debt affects the economic growth through the disincentive effect and illiquidity effect. The debt stock (volume of debt) is concerned with if the country has the assets required to clear this debt in the long run which affects the economic growth through the disincentive aspect of the debt overhang. The debt service burden (flow of debt payments) is a short term problem concerned with how the debt payments can be serviced from the current income and this affects the economic growth through the illiquidity aspect of the debt overhang which is also captured by the crowding out effect in other studies (Arit, 2013).

Conceptual review

Public Debt:

Meaning and Types The act of borrowing creates debts. Hence, government borrowing in other words implies public debt or government debt. Debt therefore refers to the resources of money in use in an organization, which is not contributed by its owners and does not in any way belong to them (Adejuwon et al, 2010). Debt is generated by the gap between domestic saving and investment, which can increase in absolute terms over time. As the gap widens and the debt accumulates, interest rates also accumulate and the country must borrow increasing amounts just to maintain a stable flow of net imports. It must also borrow to re-finance maturing debt obligations (Ogbeifin, 2007 in Adejuwon et al, 2010). Public debt or public borrowing is considered to be an important source of income to the government. If revenue collected through taxes and other sources is not adequate to cover government expenditure, government may resort to borrowing. Such borrowings may become necessary more in times of financial crises and emergencies like war, droughts, etc. (Kalyan City Life, 2011).

Nigerian Public Debt:

Nature and History Nigeria like other developing countries had faced domestic financial barrier. This constraint has made external debt an essential complement to domestic resources for promoting sustainable economic growth among these developing countries. This is possible if the economic benefits from such projects are larger than the interest paid on the debt. However, excessive external debt more often than not impedes economic growth. The burden of

debt on indebted countries has resulted in channeling of funds to debt servicing, instead of allocating resources to crucial developmental project (Ekperiware and Oladeji, 2012). The problem of debt has assumed a crisis proportion in Nigeria. What makes the debt crisis more critical is that Nigeria still has the unenviable distinction of being one of the most impoverished countries in the world. More perplexing is the fact that despite the debt forgiveness received in year 2005 from the Parish club, Nigeria's debt record has sped to a whooping sum of N8.32 trillion as at the end of 3rd quarter of 2013; out of which foreign debt accounts for N1.29 trillion or $8.26billion and domestic debt amounts to N7.03trillion compared to a total sum of N2,207.7 billion in 2006 shortly after the Paris debt cancellation (DMO, 2013). In 2005, Nigeria got a debt relief from her creditors. The debt relief was granted to Nigeria by the Paris and London club to the tone of $18 billion with the condition to buyback the balance of $12 billion. Scholars have argued that this would not have come later than the time it came because already Nigeria was in a terrible debt crisis and in a state of debt overhang. Like Ekperiware and Oladeji (2012) opine, when a country suffers from debt overhang, debt relief can improve economic efficiency. The pathetic state of the nation's debt before the relief was such that the servicing of her debt was an en-slavery of its own; worse than when Nigeria was under the colonial masters. As Bakare (2010) asserts, the debt crisis of Nigeria reached a maximum proportion in year 2003 when the country was to transfer as much as $2.3 billion to service its debt.

Infrastructural Development (Capital Spending)

Infrastructure Development involves fundamental structures that are required for the functioning of a community & society. This is usually referred to structures like roads, water supply, sewers, electrical grids, telecommunications, renewable energy, and so on (www.hhrd.org). Nworji and Oluwalaiye (2012) opine that expenses on capital projects like roads, airports, health, education, the country telecommunication, electricity generation etc., are referred to as capital expenditure. These expenses on capital projects (capital expenditure) bring about an advancement in the infrastructural status of any nation. Hence, improvement in the infrastructural status of any nation, no doubt, affects the economic fortunes of such economy (Olukoye, 2009). Thus, in this study, infrastructural development has been subsumed in government capital spending. Obviously, huge amount of financial resources are require to be mobilized by the central government of any country to effect a remarkable impact in the infrastructural status of the nation at any point in time. This is why national economic managers, in the midst of tight economic schedule, make effort to accumulate some capital (through savings) in order to acquire substantial resources overtime to embark on meaningful capital investment (infrastructural development) in the economy. Todaro and Smith (2003) in Baghebo and Edoumiekumo (2012) have argued that capital accumulation is a component of economic growth and development in any society.

Government Borrowing as a Tool for Infrastructure Development

1. **Sources of Government Borrowing**
    - Domestic borrowing (bonds, treasury bills, and loans from local financial institutions)
    - External borrowing (multilateral agencies like the World Bank, bilateral agreements, and international bond markets)
2. **Key Infrastructure Projects Funded by Borrowing**
    - Road and railway construction (e.g., Lagos-Ibadan Expressway, Abuja-Kaduna Railway)
    - Power sector investments (e.g., Mambilla Hydropower Project)
    - Expansion of port facilities and airports
3. **Economic Impact of Borrowing for Infrastructure**
    - Improvement in transportation and logistics, reducing the cost of doing business
    - Enlargment of power supply, fostering industrial growth
    - Creation of job opportunities and stimulation of local economies

Challenges of Government Borrowing for Infrastructure

1. **Debt Sustainability Concerns**
    - Rising debt-to-GDP ratio and its implications for future generations
    - High debt servicing costs limiting funds for other developmental needs
2. **Inefficiencies and Corruption**
    - Misallocation of borrowed funds leading to white elephant projects
    - Lack of transparency in project execution and budget implementation
3. **Dependency on External Borrowing**
    - Exposure to foreign exchange risks and global economic fluctuations
    - Conditionalities attached to loans that may affect national sovereignty

Policy Recommendations

1. **Enhancing Debt Management Strategies**
    - Strengthening institutions like the Debt Management Office (DMO) to ensure prudent borrowing practices
    - Establishing clear guidelines on debt ceilings and utilization for infrastructure
2. **Exploring Alternative Financing Mechanisms**
    - Public-Private Partnerships (PPPs) to reduce reliance on direct government borrowing
    - Infrastructure bonds and sovereign wealth funds for sustainable financing

3. **Ensuring Transparency and Accountability**
    - Strengthening anti-corruption measures in project execution
    - Enhancing public participation and oversight in infrastructure financing

Methodology

In this study the effect of government borrowings on capital project spending of the Federal Government of Nigeria is investigated. It solely utilized secondary data in its development. The quantitative data for the three variables of the study were sourced from the Central Bank bulletin, which consists of data on federal government domestic and foreign debts for the period of 30 years (1986-2015) and data on total capital expenditure (a proxy for infrastructural development) of the federal government for the same period. Quasi-experimental design was employed in the development of this study. Ordinary Least Square (OLS) regressions analysis was utilized in the analysis of data and solution to research model formulated below with t-statistics and F-statistics for various hypotheses tests. The analysis was done electronically with the aid of Eview statistical package. The study adopted 5% level of significance; to ascertain the validity of the time series data (i.e. whether the data are stationary or non-stationary and whether the variables co-integrate), the Dickey Fuller Unit Root and Johasen Cointegration tests techniques were adopted.

The study model which is given as:

$Y = B_o + B_1X_1 + B_2X_2 + U.$

Where: Y is the Federal Government Capital Expenditure (a proxy for Infrastructural Development)

X1 is Federal Government's External Debt records

X2 is Federal Government's Domestic Debt records

B1 and B2 are the coefficient of the independent variables

U is the error term.

The above model can be specified as follows: GCE = F(ED, DD); where GCE is Government Capital Expenditure, ED is External Debt, and DD is Domestic Debt

DATA PRESENTATION AND ANALYSIS

Table 1: Data Presentation on the Research Variables

The data for the variables of this study are presented as indicated on table 1

Year x	Year CE (Y)	ED (X1)	DD (X2)
2009	239.45	3,097.38	898.25
2010	438.7	3,176.29	1,016.97
2011	312.38	3,932.88	1,166.00
2012	241.69	4,478.33	1,329.68
2013	351.3	4,890.27	1,370.33
2014	519.5	2,695.07	1,525.91
2015	552.39	451.46	1,753.26
2016	759.32	438.89	2,169.64
2017	960.89	523.25	2,320.31
2018	1,152.80	590.44	3,228.03
2019	883.87	689.84	4,551.82
2020	918.55	896.85	5,622.84
2021	874.83	1,026.90	6,537.54
2022	1,108.39	1,373.58	7,118.98
2023	783.12	1,631.52	7,904.0
2024	818.37	2,111.53	8,837.00

Source: CBN Statistic Bulletin

Tests for Stationarity (Using Augmented DickeyFuller) The ADF test result reveals that data for dependent variable: Capital Expenditure (Y) and that of first independent variable: External Debt (X1) are stationary at 1st difference while data for the second independent variable: Domestic Debt (X2) are stationary at 2nd difference. Therefore, we conclude that the data used for the variables of the study are stationary and the findings of their analysis are considered valid and reliable for decision-making. Test for Long-term Relationship of the Variables Using Johansen Cointegration Test The result of the test reveals that the trace statistic value (0.974391) is less than the critical value (3.841466). This shows that there is no long run relationship of the two categories of variables (dependent and independent) in the model. This result is further evidenced in critical value (prob) of 0.3236 which falls outside the significance region of 0.00 – 0.05 indicating a case of no long run relationship (effect) of the variables

Model Analysis and Test of hypotheses

The result of the model analysis is as indicated on table 2. In the results it show that the Adjusted RSquare value = 0.61905 (i.e. 62%). This shows that the explanatory or independent variables included in the model (External and Domestic debt) accounted for 62% variation in the dependent variable (Capital Expenditure). The remaining unexplained is taken care of by U, the error term. The two independent variables jointly influence the dependent variable significantly. This was consolidated with the result of the joint signified by the F-statistics (Prob) which showed value of 0.000001 thus falling within the significance region of 0.00 to 0.05 and the t-stat (prob) of the constant (C) 0.0114 which falls within the significance region 0.00 – 0.05; indicating a case of joint significant impact of the explanatory variables on the dependent variables. With this result, the third null hypothesis of the study which states that the federal government's borrowing has no significant effect on the nation's infrastructural development is rejected and the alternative assertion accepted.

Table2: Statistical Analysis and Tests

Results Dependent Variable: CE__Y_

Method: Least Squares

Date: 04/02/25

Time: 20:56

Sample: 1986 2015 Included observations: 15

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	179.9101	66.22179	2.716781	0.0114
ED__X1_	0.002745	0.031298	0.087704	0.9308
DD__X2_	0.115365	0.016565	6.964229	0.0000

R-squared	0.645319	Mean dependent var	419.4053
Adjusted R-squared		S.D. dependent var	373.4952
0.619047		Akaike info criterion	13.81325
S.E. of regression		Schwarz criterion	13.95337
230.5265		Hannan-Quinn criter.	13.85807
Sum squared resid	1434847.	Durbin-Watson stat	0.483682
Log likelihood	-		
204.1987			
F-statistic	24.56240		
Prob(F-statistic)			
0.000001			

TABLE 2 HERE DISCUSSION OF FINDINGS

In the result of the analysis above, we found that:

1. The first hypothesis test shows that total external debt undertaken by Nigerian government for the period under review did not show any significant relationship with capital project development in the economy. This result agrees with the finding of Ogunmuyiwa (2011) which concluded that since causation between external debt and economic growth could not be established in Nigerian context, no significant relationship exists between the two variables. However, it disagrees with findings from most of the scholars reviewed which hold that either a positive or a negative relationship exists between foreign/external debt and economic development. Such scholars like Zeshan et al (2014), Ezeabasili et al (2011), Eravwoke and Oyovwi (2013), Babu et al (2014), Garba (2014), Sanaullah et al (2015), Ahmed and Shakur (2011), Obademi (2013), Rahman et al (2012) and Adesola (2009).

2. The test on the second hypothesis reveals that domestic debt undertaken by Nigerian government for the period under review significantly affected capital project development in the economy. This agrees with Tamunonimim (2014) and Ozurumba & Kanu (2014). However, the result runs contrary to the findings of the study by Onyeiwu (2012) and Adofu and Abula (2010).

3. From the test conducted on the third hypothesis of this study, which measures the joint effect of the two components of public debt on infrastructural development (capital spending), it shows that public debt has significant effect on infrastructural development proxied with government's capital spending. Given that infrastructural development (typified in increase in capital spending of the federal government) is taken as a good measure of economic development; the result shows that the Nigerian public debt (domestic and foreign debts) jointly lead to a positive change in the level of the nation's infrastructural (capital spending) development. This finding agrees with the result of the study carried out by Egbetunde (2012), which observed that public debt and economic development are positively related particularly if the government is sincere with the loan and used it for the development of the economy rather than channel the funds to their personal benefits. However, the test for long term relationship using Johansen Cointegration reveals a short term relationship among the two groups of variables and that no long run effect exists. To that extent, the study disagrees with the conclusion proffered by Egbetunde (2012) that public debt and economic growth have long run relationship but agrees with Obadan (2012) on the one hand that in the short run, the impact of borrowed fund on the Nigerian economy was favourable; but disagrees with him on the other hand on the basis of his conclusion that in the long run, the impact of debt is positive.

CONCLUSION

Government borrowing has played a crucial role in bridging Nigeria's infrastructure gap, but it must be managed prudently to ensure long-term sustainability. While borrowing enables the government to undertake critical projects, inefficiencies, corruption, and rising debt burdens pose significant challenges. A balanced approach, including

improved debt management, alternative financing mechanisms, and enhanced transparency, is essential to maximizing the benefits of infrastructure investment while maintaining fiscal stability. From the results of the statistical analysis as already discussed, the study affirms that: a. External/foreign debt has not contributed significantly in the development of Nigeria's physical infrastructure. Thus, the huge external debt profile of Nigeria even before the debt forgiveness of 2005 till now is not justifiable and uncalled for. b. Nigeria is better-off with domestic borrowings than foreign loans because an increase in domestic loans calls for a positive increase in government's spending on capital projects specifically in the shortrun. c. In the long run, both domestic and foreign borrowings are adverse to infrastructural development in Nigeria which is occasioned by the insincerity and corrupt dispositions of government functionaries.

RECOMMENDATIONS

In the face of the findings and conclusion above, the following recommendations are proffered to the government

Conclusion

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