

**PUBLIC DEBT, EXPORT, IMPORT AND STANDARD OF LIVING IN NIGERIA**

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**Abstract**

Public debt and exports have a complex and often contradictory relationship with economic development in Nigeria. Public debt can stimulate short-term economic growth by funding infrastructure and development projects, but high debt burdens can also lead to unsustainable debt servicing, diverting resources from other vital sectors and hindering long-term growth. The main objective of the study is to analyze public debt, export, import and standard of living in Nigeria. The variables of external debt, domestic debt, oil export and non oil export were regressed on Per Capita Income. This study is anchored on Solow's Growth Theory. Econometric technique involving Unit Root test and the Ordinary Least Square Regressions was used for data analysis. The result of the study revealed that external debt has negative and insignificant effect on per capita income in Nigeria. Domestic debt has significant effect on per capita income in Nigeria. Oil export has positive and significant effect on per capita income in Nigeria. Non oil export has significant effect on per capita income in Nigeria. The R<sup>2</sup> of 76.645% and adjusted R<sup>2</sup> of 72.58 indicate that the explanatory variables could exert a joint influence of 76.64% on the dependent variable, thus capable of coursing variations in the dependent variable. The study concludes that public debt and export has improved economic development in Nigeria: The study recommends that though debts are inevitable, especially for a developing nation like Nigeria, new debts should be incurred on the basis that most of the amounts should go into viable projects with a promising outlook of moving the nation from consumption to production. Policymakers/regulatory authorities in Nigeria should consciously analyze and examine fluctuations in the economy of countries on which they are dependent to prevent them from having a more adverse effect on the country's economy. Industries in Nigeria should focus on building strong, independent, and flexible operational processes that are capable of adjusting to changes in the economic situation of

the country and will prevent it from being heavily affected by the financial crisis. External debt should be contracted solely for short term investments with economic reasons and not for socio-political reasons or white elephant projects without economic justifications that can enhance human capital development in Nigeria. Government should avoid accumulation of unserviceable external debt stock overtime because it leads to debt overhang. Nigeria should use her foreign reserves instead of incurring more external debts, as this will ensure increase in real economic growth and reduce capital flights through repayments of debts to external sources.

**Key Words: Public Debt, Export, Per Capita Income, Nigeria**

## Introduction

One of the major goals of macroeconomic policy is to achieve sustainable economic growth and developments. In Nigeria the government tries to influence the performance of the national economy through fiscal and monetary policies such as changing the level of taxation, government spending, or the supply of money or credit to the economy. Changing macroeconomic policies affect national income, prices, interest rates and exchange rates all of which influence economic development (Ogini, 2023). Economists use different indicators to measure the level of economic development in a country. These include per capita income, poverty rate, literacy rate, declining infant mortality and maternal mortality increasing life expectancy, real gross domestic product, capacity utilization, human capital development and industrial output etc. according to Adegbemi, (2018) economic development leads to the creation of more opportunities in the sector of education, health sector, research, human development, capacity utilization, industrial output, full employment and environmental conservation.

Public Debt: refers to how much a country owes to lenders outside its shore (Dairu,2017). Public debt also called national debt includes the totality of debt owed by government of a nation internally and externally. External debts are those obligations of government to international institutions such as IMF and AfDB (Udoka & Lari 2011). Internal debts are those debt obligation of government owed to residents of the country. The accumulation of debts or borrowings (internal and external) is as a result of accumulation of a country's budget deficits resulting from government spending more than it takes in through the instrumentality of taxation (Orgah, 2013). Joyade and Oni (2016) viewed that while internal debt (borrowing) of a country may not have significant burden on her citizen as payment of the interest and principal to service the debt

involves a transfer of purchasing power from a section of the citizens to another and therefore productive, external component of public debt on the other hand is counter-productive involving greater burden as interest charges and repayment of the principal sum involves transfer of resources to creditors/lenders abroad. Collaborating Joyade & Oni (2016), Lawal and Muna (2017) stated that resources transfer to foreign nations is a sad and unfortunate fund raising and financing arrangement as interest payment alone is capable of reducing the net income of the debtor nation and therefore counter-productive especially where the funds are not properly utilized as the case with many developing nations of Africa.

Nigeria's economy like other nations in Sub-Saharan Africa is a developing one fraught with many challenges. Prominent among these challenges is paucity of funds to prosecute many of her developmental plans (Dokuwbo & Ola 2017). As a mono-cultural economy, the only source of her revenue do most times suffer price reduction for reasons such as glut in the supply of the commodity (oil), low demand in the international market and occurrence in the economy that might affect production. A good example of such occurrence in 2020 is

Covid-19 pandemic where activities across the globe were brought to a standstill. Drastic revenue reduction in the year 2020 affected many developmental plans of the country and government resorted to borrowing to execute some of the programmes of the budget. For instance, the original planned budget of about N9.1 trillion benched marked against projected oil prices of \$60per barrel has to be revised to about N 8.1 trillion benched marked

against \$30 per barrel as a result of the pandemic. Many countries especially developing nations of Africa like Nigeria borrowed to finance programmes in 2020 as a result of pandemic (Desmond, 2020). Another bitter, sad and unfortunate of these many causes of the nation's debt crisis is large accumulation of budget deficit and government's inability to reduce her expenditure especially, the non-essential/non-value adding ones thus, Khalil and Junaidu (2019) noted that the most challenging issues endangering the growth of the nation's economy is budget deficit accumulation and failure of successive government to identify, measure accurately the cost of activities and governance in order to eliminate or reduce to the barest minimum the cost of activities and engagement that are non-productive

(Horgan 2018). Morris (2019) noted that borrowing will be able the order where revenue from taxation can no longer sustain the level of government activities of which many of them (activities) are non-essential in nature and are impossible to eliminate or reduce for political reasons. Closely related to budget deficit accumulation and cost of governance reduction problem factors, is funds

insufficiency and short fall in finance attributable to financial mismanagement, leakages, corruption and embezzlement that have rendered developmental plans difficult to execute and government had to resort to borrowing. Financial leakages in all firms have become endemic and a cankerworm that have arm twisted the wheel of development in Nigeria (Tope & Bode, 2018). On the issue of corruption, in Nigeria, Marthia (2020) noted that as good as government intervention may be, funds meant for programmes are viable projects usually ended up in private pockets. Mbah (2020) cited the probe of corruption allegation against management of Niger Delta Development Commission (NDDC) and other agencies of government in 2020 as examples of many cases of financial mismanagement that has been draining the resources of the country. For a drained economy, borrowing is one of the ways government can resort to in order to execute her programmes (Khalil & Junaidu 2019).

Savings provide developing countries (including Nigeria) with the much needed capital for investment which improves economic development. Increase in savings leads to increase in capital formation and production activities that will lead to employment creation and reduce external borrowing of government. Low domestic saving rates may maintain low-growth levels because Harrod Domar model suggested that savings is an important factor for economic growth and development of a nation.

Economic theory suggests that reasonable levels of borrowing by a developing country are likely to enhance its economic growth (Edeminam, 2021). Therefore, a developing country wishing to mobilize capital resources to foster economic growth and development may resort to borrowing to encourage growth. Countries at early stages of development like Nigeria borrow to augment the dominance of meager capital stocks. The anticipation is that the countries are likely to have investment opportunities with rates of return higher than those of their counterparts in developed economies. Enhanced economic growth has the potential to alleviate a country's poverty situation (Chukwuemeka & Agu, 2021).

Consequently, there are two major sources of debts in Nigeria the internal and external sources: the internal sources include development stocks, treasury bills, treasury certificate, treasury bonds and ways and means of advances, while external debt sources include bilateral and multilateral sources such as world bank, International monetary fund (IMF), African Development bank. There are London group of creditors and the Paris club group of creditors (Aminu, Ahmadu & Salihu, 2013). In the light of the aforementioned backdrop, the study examined public debt, export, import and standard of living in Nigeria

## Statement of the Problem

The absolute need for sustained economic development for emerging and developing economies cannot be overemphasized. Debt is one of the strategies whose implementation can quicken the pace of economic development. However, the effect of this strategy needs to be determined and examined from time to time especially for developing economies. The inability of an economy to meet her debt service obligations is largely caused by inadequate knowledge of the nature, structure, and magnitude of the debt in question. Available evidence, comparative, theories and literatures on the relationship between public debts and economic development have shown mixed results. Some studies for instance, Abula and Mordecai (2016), Sheikh, Faridi, and Tariq (2010); Putunoi and Mutuku (2013); Mba, Yuni and Oburota (2013); Amassoma (2011); all expressed positive reaction regarding this assertion. On the contrary, the study of Cunningham (1999); Sachs (1986); Deshpande (1997); Sawada (1994); Rockerbie (1994); Uma, Eboh, Obidike (2013); Adouful and Abula (2010); Tamonoimi (2013) all found a negative relationship between public debts and economic development in Nigeria and other economies. Some scholars have gone ahead to argue that certain variables such as interest rates, exchange rates, and inflation to mention a few must be stable to stimulate development with borrowed funds. The studies of Uma, Eboh and Obidike (2013); and Mathew and Mordacai (2016) will anchor this study. Again, most of the studies conducted in Nigeria were mostly on public debt and economic growth, very few actually considered economic development, to the best of the researchers' knowledge. This study is therefore, considered imperative especially at this stage that the Nigerian economy is dwindling and characterized with poor standard of living. Though Uma et., al (2013) investigated the influence of public debt and external debt servicing on economic development of Nigeria from 1970 to 2010. The study carried a test of stationarity of time series data using Augmented Dickey-Fuller test and johansen test for co-integration to ascertain the long-run relationship of the variables. This study therefore examined public debt, export, import and standard of living in Nigeria

## Review of Related Literature

### Conceptual Framework

#### Public Debt

Public debt is the national debt, but some countries also include the debt owed by states provinces, and municipalities. Regardless of what it is called, public debt is the accumulation of annual budget

deficits. It is the result of years of government leaders spending more than they take in via tax revenues. For more, see How the Debt and Deficit Affect Each other. Public debt" is money that is owed to any other entity. Public debt includes money that is owed to individuals, mutual funds, hedge funds, pension funds, foreign governments to mention. Public Debt: refers to how much a country owes to lenders outside its shore (Dairu, 2017). Public debt also called national debt includes the totality of debt owed by government of a nation internally and externally. External debts are those obligations of government to international institutions such as IMF and AfDB (Udoka & Lari 2011). Internal debts are those debt obligation of government owed to residents of the country. The accumulation of debts or borrowings (internal and external) is as a result of accumulation of a country's budget deficits resulting from government spending more than it takes in through the instrumentality of taxation (Orgah, 2013). Joyade and Oni (2016) viewed that while internal debt (borrowing) of a country may not have significant burden on her citizen as payment of the interest and principal to service the debt involves a transfer of purchasing power from a section of the citizens to another and therefore productive, external component of public debt on the other hand is counter-productive involving greater burden as interest charges and repayment of the principal sum involves transfer of resources to creditors/lenders abroad. Collaborating Joyade & Oni (2016), Lawal and Muna (2017) stated that resources transfer to foreign nations is a sad and unfortunate fund raising and financing arrangement as interest payment alone is capable of reducing the net income of the debtor nation and therefore counter-productive especially where the funds are not properly utilized as the case with many developing nations of Africa.

### **Public Debt Management**

The Nigerian debt management office (DMO) reported that the Nigerian public debt stock on the federal government and that of the states and federal capital territory as of the end of March 2021 is valued at thirty-three trillion Naira (N33.107) or \$87.239 billion. In addition, the DMO revealed that the debt stock includes promissory notes totaling N940.220 billion issued to settle inherited areas of the federal government to states, oil companies engaged in marketing oil, exporters, and local contractors. This was compared to the public debt stock of N32.916 trillion of the country as of December 2020, indicating an increase of 0.58 percent. In a further analysis of the Nigerian debt profile the federal government shares of the domestic debt includes FGN bonds and Green bonds utilized in financing infrastructural and capital projects in addition to the promissory notes while the external debt stands at \$32.86billion .the Nigerian domestic source of borrowing is bank borrowing, issued Treasury bills, bonds and securitized papers among others.

## Public Debt and Economic Development

An effectively managed public debt enhances the stability and Development of the economy through judicious utilization of the revenue and repaying the borrowings in due time with limited interest and curtailing unnecessary financial risk in fact, the effect of domestic debt as part of the complex issues influencing the structural stability of the Nigerian economy over time. Even after the debt cancellation in 2003, the issues of fiscal balance in Nigeria have continued to attract the interest of scholars especially after the implementation of the economic policy in 2017 titled "Nigerian Economic Recovery and Growth Plan" directed towards reviving the impressive position of economic productivity (Idris & Ahmed, 2017).

## Exports

An export in international trade is a good or service produced in one country that is bought by someone in another country. The seller of such goods and services is an exporter; the foreign buyer is an importer. Exports are the goods and services produced in one country and purchased by residents of another country. It doesn't matter what the good or service is. It doesn't matter how it is sent. It can be shipped, sent by email, or carried in personal luggage on a plane. If it is produced domestically and sold to someone in a foreign country, it is an export (Serhat & Sinemis, 2016).

Exports are one component of international trade. The other component is import. They are the goods and services bought by a country's residents that are produced in a foreign country. Combined, they make up a country's trade balance. When the country exports more than it imports, it has a trade surplus. When it imports more than it exports, it has a trade deficit (Rummana, 2014)

## Per Capita Income

Per-capita income is a measure of economic well-being. Through its effect on economic development, it can indirectly affect sustainable development. Over the years, income per-capita was commonly used to describe the wellbeing of individuals in a specific period of time. This was usually done without putting into consideration the inter-temporal dimension in which sustainable development can also be affected by income per-capita level. Income per-capita level can indirectly affect sustainable development through its effect on economic development. This can be through the effect of income per-capita on education, health, migration and sanitation levels. Having low levels of income per-capita is more likely to reduce the individuals' access to high levels of education and knowledge. In addition, it deprives individuals from better nutrition which

negatively affect their health status and productivity as well as it encourages migration from the country whenever possible. Also, low income per capita is associated with poor environmental conditions such as poor sanitation, high levels of pollution and lack of access to clean water. In particular, the literature is rich in tracing the effect of low levels of income per-capita on pollution emissions level as illustrated by the Environmental Kuznets Inverted U hypothesis (EKC) (Kolawole, 2013). Putting all these effects into consideration will result in adverse effects on sustainable development.

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### **Theoretical Framework**

This study is anchored on Solow's Growth Theory. Robert Solow and Swan introduced the Growth Solow's model in 1956. Their model is also known as Solow-Swan model or simply Solows model. In Solow's model, other things being equal, states that saving, investment and population growth rates are important determinants of economic growth. Higher saving, investment rates, lead to accumulation of more capital per worker and hence more output per worker. On the other hand, high population growth has a negative effect on economic growth simply because a higher fraction of saving in economies with high population growth has to go to keep the capital-labour ratio

constant. In the absence of technological change and innovation, an increase in capital per worker would not be matched by a proportional increase in output per worker because of diminishing returns. Hence capital deepening would lower the rate of return on capital.

Solow's neoclassical growth model is an extension of the theory of Cobb Douglas, explaining that the output or gross domestic product depends on the technology, employees, physical capital, human capital as well as the amount of natural resources. So it can be written by the following equation.

$$Y = A f(L, K, H, N)$$

where  $f$  is the function that shows how the inputs are combined to produce output.  $A$  is a variable that indicates the availability of production technology.  $L$  is the labor.  $K$  is the physical capital.  $H$  is the human capital, and  $N$  is the natural resources.

The first factor that determines the output of a country is labor. Economists argue that population growth will affect life in society. The most impact is the change in the total labor force. Large population will have a large labor force in producing goods and services. In addition, economists believe that growth is the engine of the world's population in technological progress and economic prosperity

The second factor is the physical capital. Physical capital is the completeness of the equipment and structures used to produce goods and services (Ogbonna, Ibenta, Chris-Ejiogu & Atsanan, (2019).

Investment is one form of physical capital in the production function. Both domestic and foreign investment holds the contribution in accelerating the economic growth of a country (Ogunjimi.2019).

Human capital is the third factor in the neoclassical growth model. Human capital acquired knowledge and skills of workers through education, training, and experience. Quality human capital will enhance the ability of a country to produce goods and services (Pattillo, Poirson, & Ricci, 2004).

.The fourth factor is the natural resources. Natural resources are inputs in the production activities provided by nature, such as land, rivers and mineral content in the earth. Many countries have good natural resources, bringing the country towards economic development.

The fifth factor that determines the output of a country is the mastery of science and technology. Technological knowledge is an understanding of the best ways to produce goods and services. When there is a technological development, it will need less labor. So most of the workforce will be able to produce other goods and services, the result will be increased productivity.

### Empirical Review

Udenta, Nwiboko, and Atuma (2025) examined the impact of public debt on economic growth in Nigeria using data from CBN, and covering 1985 to 2020. Using gross domestic product as a proxy for economic growth, while domestic debt, external debt, and total debt servicing a measure of public debt prole, it was discovered that a mixed order of integration existed, hence we adopted the autoregressive distributed lag (ARDL) model. e results showed that external debt had a significant and positive impact on GDP in Nigeria. However, domestic debt had a positive and insignificant impact on GDP. It also showed that total debt servicing payment exerted negative and significant impact on GDP in the short-run and negative and insignificant impact on GDP in the long-run.

Amani (2018) examine the impact of government debt on macroeconomic indicators evidence from G7 and ASEAN countries. The aim was to investigate the impact of government debt on certain macroeconomic and wellbeing indicators in a group of industrialized and developing countries. The results of empirical analysis of correlation indicated a positive relationship between government debt and macroeconomic indicator (GDP per capita) in G7 countries while government debt of ASEAN countries has a negative impact on macro-economic and wellbeing indicators. Cristiana and Philipp (2010) carried out an investigation into the impact of high and growing government debt on economic growth: An empirical investigation for the Euro area. The study investigated the

average impact of government debt on per capita GDP growth in twelve (12) Euro area countries over a period of 40 years starting from 1970. endings revealed a non-linear impact of debt on growth with a turning point beyond which the government debt to GDP ratio has a deleterious impact on long term growth.

Robert (2014) conducted a study on the impact of domestic public debt on private investment in Kenya. Data on domestic debt, GDP, interest rates and private investment of the country for the period 1967-2007 were obtained. Results of unit root test revealed that GDP growth has induced private investment in the countries.

Nur, Shafinar and Abdul (2019) did a review on whether or not public debt affects economic growth. The aim was to ascertain whether there exists mutual consensus on the effects of public debt on the economic growth of a country or group of economies. A systematic review on related articles from Scopus data base was conducted. A standard procedure in the preferred reporting items for systematic review and Meta analysis adopted. Thirty three (33) articles were chosen and reviewed. It was found that there is no mutual consensus on the relationship between public debt and economic growth.

Osakwe, Anachedo and Okonkwo, (2022) investigated the effect of external debts on the Nigerian economy from a period of 1990 – 2020. This study used an ex post facto research design, Augmented Dickey Fuller (ADF) unit root was used for stationarity test and the Vector Auto Regressive Distributive Lags test was employed for the data analysis. The variables tested were External debt being the independent variable while Exchange rate, growth rate of GDP and Inflation rate are the dependent variables. Findings revealed that external debt impedes economic growth leading to deteriorating exchange rate which is followed by increase in inflation, which hampers economic growth.

Ohunmah, (2021) investigated the impact of external debt stock and debt servicing on human capital development (HCD) in Nigeria from 1960-2019. The Ordinary Least Squares (OLS) regression technique was used to test eight hypotheses. Results revealed that external debt servicing has an inverse relationship with HCD whereas external debt stock has a significantly positive impact on HCD.

Abiodun, Uwaleke and Umar, (2022) investigated the relationship between external debt service and economic growth in Nigeria from 1981 to 2020. A quantitative research approach was adopted for this study. The method for estimation was the Auto-Regressive Distributed Lags (ARDL) model. The ARDL bound test results showed there was co-integration. The speed of change between the short-run and long-run of the co-integrating equations was 88.86%. The result shows resource depletion effect of external debt services on growth. External debt stock has a positive but not significant relationship with growth. There is a positive but not significant relationship between external reserves to external debt ratio with growth. Debt service to export ratio has a positive relationship with growth.

Rasak, (2022) evaluated the growth effect of external debt and accounted for structural break in the external debt-growth nexus in Nigeria. Annual data spanning 1981-2020 were sourced from global databases and analysed using the dynamic ordinary least square (DOLS) estimator. The

result showed that external debt has growth-inhibiting effects on the Nigerian economy and that structural break matter in the analysis of the growth effect of external debt in Nigeria.

Adegbe, Emmanuel, Theophilus and Ademola, (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.

John, Obot, Effiong, and Akaniyene, (2022) examined the effect of external debt on economic growth in Nigeria. The data were collected, analyzed and tested using the Ordinary Least Square (OLS) multiple. It was revealed that there is an insignificant relationship between external debt stock and gross domestic product in Nigeria. Furthermore, external debt service cost has a significant impact on gross domestic product in Nigeria.

Yusuf, Aminu and Ismaila, (2021) examined the effect of external debt trap on economic growth in Nigeria. ADF and PP were employed in testing the unit root property of the series, Ordinary least square method, Johansen cointegration test and Error Correction Model were used to establish the short and long run relationship between the variables under investigation. The study revealed that increase in external debt service ratio, export, and exchange rate affect RGDP positively, while external debt is negatively related to RGDP in Nigeria. Meanwhile, exchange rate has significant impact on economic growth in Nigeria while external debt, external debt service ratio and export were insignificant. Johansen co-integration test shows that there is long run relationship between the variables of the model at 5% level of significance. The estimated coefficient of the error correction term (-1.052231) is significantly different from zero at 5 per cent level and with the appropriate negative sign. This suggests the validity of long-run equilibrium, at an adjustment speed of 105 per cent of the system (economy) in a year to its previous equilibrium.

George-Anokwuru, and Inimino, (2021) focused on the impact of external debt on economic growth in Nigeria from 1980 to 2017. The Augmented Dickey-Fuller unit root test and Autoregressive Distributed Lag techniques were used as the main analytical tools. The result of the unit root test revealed that the variables were stationary at order zero and one, which satisfied

the requirement to employ the ARDL Bounds testing approach. The ARDL Bounds test revealed the existence of long run relationship among the variables. Furthermore, the result revealed that external debt and external debt service have negative and significant relationship with economic growth in Nigeria both in the long run and short run.

Ekor, Orekoya, Musa and Osikwemhe, (2021) examined the impact of foreign debt on the Nigerian economy. Applying a dynamic variant of the auto-regressive distributed lag model, the main result from this study is that in the long run, external debt accumulation and the associated service payments have negative effects on the economy. The policy implication is that government should always ensure that external debt accretion is sustainable and used for infrastructure development.

Okoye, Modebe, Erin and Evbuomwan, (2020) examined the effect of external debt on economic growth in Nigeria. Specifically, the study examines whether external borrowings and its major determinants like exchange rate, gross fixed capital formation and inflation rate have supported the growth of the Nigerian economy. The parameters of the model were estimated using the ordinary least squares method. The result shows evidence of significant positive correlation between economic growth and the explanatory variables namely external debt, exchange rate and inflation rate. A negative correlation was however observed between economic growth and gross fixed capital formation.

Humnath, Mitra Lal and Dhruva (2022) examined equilibrium relationships and dynamic causality between economic growth, exports, and imports in Nepal using time-series data between 1965 and 2020. The test results show no evidence favoring the exports-led growth and growth-led exports hypotheses in both the short and long run. The study finds evidence supporting the imports-led growth hypothesis in the short term and the growth-led imports hypothesis in the long term.

### **Gap in Literature**

The review pointed out a strong disagreement on the effects of public debt, export and imports on economic development in Nigeria. This disagreement comes in the form of the direction of relationship as well as the level of significance of the relationship. These shortcomings have contributed to the knowledge gap in the literature. Another gap in literature is the coverage of public debt, export and imports variables employed in the investigation of effects of public debt, export and imports on economic development in Nigeria. The present study includes all the core public debt, export and imports variables such as external debt, domestic debt, oil export, non oil

export, imports and government borrowing to determine the actual effect of public debt, export, import on standard of living in Nigeria

### **Methodology**

#### **Research Design**

The study adopted the *ex-post facto* research design because secondary data is sourced from the Central Bank of Nigeria Statistical Bulletin, the CBN Annual Report and Statement of Accounts, and the National Bureau of Statistics. Independent variables are external debt, domestic debt, oil exports, non-oil exports, and imports, while economic development is the dependent variable, which is also proxied by per capita income

#### **Model Specification**

The models for this study were adopted and modified in line with each objective of the study

The model that we used for objective three is adapted from the work of Nwakuche and Anele (2020) who examined the effect of public debt, export and imports on standard of living in Nigeria

#### **The model is stated thus:**

$$PCI = f(EXD, DMD, EPT)$$

Where:

PCI = Per Capita Income

EXD= External Debt

DMD= Domestic Debt

#### **The modified Model is stated thus:**

$$PCI = f(EXD, DMD, OE, NOE)$$

Where:

f = Functional Relationship

PCI = Per Capita Income

EXD= External Debt

DMD= Domestic Debt

OE= Oil Export

NOE= Non Oil Export

**The Econometric Equation Form of the Model is:**

$$PCI = \alpha_0 + \alpha_1 EXD + \alpha_2 DMD + \alpha_3 OE + \alpha_4 NOE + \varepsilon \quad (3 \text{ Eqn})$$

$\mu$  = Stochastic Disturbance (Error Term)

$\beta_0$  = Intercept of Relationship in the Model Constant

$\beta_1, \beta_2, \beta_3, \beta_4$  and  $\beta_4$ = are the Coefficients of the Independent Variables

**Data Analysis**

**Unit Root Test**

**Table 1: Summary Unit Root test for Stationarity**

| Variables | At Level<br>1(0) | At First<br>Difference<br>1(1) | At Second<br>Difference | Order of<br>Integration | Probability |
|-----------|------------------|--------------------------------|-------------------------|-------------------------|-------------|
| PCI       | -4.561864        |                                |                         | 1(0)                    | 0.0012      |
| EXD       | 3.718454         |                                |                         | 1(0)                    | 0.0037      |
| DMD       | -3.907281        |                                |                         | 1(0)                    | 0.0053      |
| OE        | -4.968378        |                                |                         | 1(0)                    | 0.0085      |
| NOE       | -5.045210        |                                |                         | 1(0)                    | 0.0003      |

**Source: Eviews 9.0**

The variables were tested for stationarity. The test is aimed at understanding the state at which the variables can be held stable for regression analyses. This test becomes pertinent because time series variables are often prone to non-stationarity which is capable of distorting the reliability of regression results. The variables used in the analysis were subjected to Augmented Dickey Fuller (ADF) Tests, to determine whether they are stationary series or non-stationary series. The variables were tested for stationarity at “intercept only” and at “intercept and trend.

The result on Table 4 revealed that at level, under the “intercept only”, return on equity credit risk, liquidity risk, operational risk and capital adequacy risk, were stationary at level [1(0)]

From the analyses of stationarity of the variables, it was seen that the variables have stationarity of level. The implication of the result of the stationarity test is that the Ordinary Least Square Technique which is capable of handling stationary at level I(0) should be used for the data analysis. Thus, the most suitable tool of analyses is the Ordinary Least Square Method of analysis.

### **The Ordinary Least Square Regressions**

#### **The Ordinary Least Square**

Dependent Variable: ROE

Method: Least Squares

Date: 19/03/26 Time: 16:32

Sample: 1988 2025

Included observations: 37

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| Variable | Coefficient | Std. Error | t-Statistic | Prob.  |
|----------|-------------|------------|-------------|--------|
| C        | 3.045556    | 0.414446   | 2.348503    | 0.0010 |
| EXD      | 1.324803    | 0.027139   | 1.407683    | 070342 |
| DMD      | 0.004398    | 0.013946   | 3.315386    | 0.0049 |

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|     |          |          |          |        |
|-----|----------|----------|----------|--------|
| OE  | 2.035757 | 0.013555 | 2.637984 | 0.0137 |
| NOE | 1.324435 | 0.130702 | 3.186949 | 0.0041 |

|                    |          |                       |           |
|--------------------|----------|-----------------------|-----------|
| R-squared          | 0.766467 | Mean dependent var    | 8.857538  |
| Adjusted R-squared | 0.725813 | S.D. dependent var    | 2.090952  |
| S.E. of regression | 0.135299 | Akaike info criterion | -0.999695 |
| Sum squared resid  | 0.494256 | Schwarz criterion     | -0.727603 |
| Log likelihood     | 22.49497 | Hannan-Quinn criter.  | -0.908144 |
| F-statistic        | 15.23150 | Durbin-Watson stat    | 2.976966  |
| Prob(F-statistic)  | 0.000031 |                       |           |

**Source: Eviews 9.0**

**External Debt (EXD):** The coefficient of external debt is negative at 1.324803 with t-Statistic of 1.407683 and probability value of 0.7342 which means that external debt has negative and insignificant effect on per capita income in Nigeria.

**Domestic Debt (DMD):** The coefficient of domestic debt is positive at 0.004398 with t-Statistic of 3.315386 and probability value of 0.0049 which means that domestic debt has significant effect on per capita income in Nigeria

**Oil Export (OE):** The results showed that the coefficient of oil export is positive at 2.035757 with t-Statistic of 2.637984 and probability value of 0.0137 which suggests that oil export has positive and significant effect on per capita income in Nigeria.

**Non Oil Export (NOE):** The coefficient of non oil export is positive at 1.324435 with t-Statistic of 3.186949 and probability value of 0.004 showing that non oil export risk has significant effect on per capita income in Nigeria

The R2 of 76.645% and adjusted R2 of 72.58 indicate that the explanatory variables could exert a joint influence of 76.64% on the dependent variable, thus capable of coursing variations in the dependent variable

### **Conclusion**

The result of the study revealed that external debt has negative and insignificant effect on per capita income in Nigeria. Domestic debt has significant effect on per capita income in Nigeria. Oil export has positive and significant effect on per capita income in Nigeria. Non oil export has significant effect on per capita income in Nigeria. The R2 of 76.645% and adjusted R2 of 72.58 indicate that the explanatory variables could exert a joint influence of 76.64% on the dependent variable, thus capable of coursing variations in the dependent variable.

The study concludes that public debt, export, import has improved standard of living in Nigeria

### **Recommendations**

The study recommends that though debts are inevitable, especially for a developing nation like Nigeria, new debts should be incurred on the basis that most of the amounts should go into viable projects with a promising outlook of moving the nation from consumption to production. Policymakers/regulatory authorities in Nigeria should consciously analyze and

examine fluctuations in the economy of countries on which they are dependent to prevent them from having a more adverse effect on the country's economy. Industries in Nigeria should focus on building strong, independent, and flexible operational processes that are capable of adjusting to changes in the economic situation of the country and will prevent it from being heavily affected by the financial crisis. External debt should be contracted solely for short term investments with economic reasons and not for socio-political reasons or white elephant projects without economic justifications that can enhance human capital development in Nigeria. Government should avoid accumulation of unserviceable external debt stock overtime because it leads to debt overhang. Nigeria should use her foreign reserves instead of incurring more external debts, as this will ensure increase in real economic growth and reduce capital flights through repayments of debts to external sources. External debt finance should be channeled to only projects with the highest priority. In doing so, defining the purpose, duration, moratorium requirements and commitments, negotiation fees, including the conditions under which the government can approve and guarantee external loans to improve standard of living in Nigeria

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