

## Foreign Debt Accumulation and Inclusive Growth in Nigeria

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### Abstract

*The study examined foreign debt accumulation and inclusive growth in Nigeria using time series data for the period of 1981 to 2019. The study used the sum of Gini coefficient and GDP per capita as proxy for inclusive growth being the dependent variable while foreign debt, foreign debt service payment and exchange rate were the independent variables. The study used ARDL as its estimation technique. The study result revealed that foreign debt had negative impact on inclusive growth in Nigeria. Based on its major finding, the study concluded that increase in led to decrease in inclusive growth in Nigeria. The study based on the finding, recommended that Nigerian government should ensure that borrowing from the rest of the world is reduced to the barest minimum in order to achieve the desired level of economic growth in Nigeria. This is necessary because as a country continues to borrow from the rest of the world, the productive capacity of economy might be reduced due to mismanagement of the foreign debt. Therefore, due to mismanagement and misappropriation of public fund such as foreign debt, there is need for the Nigerian government to change her borrowing orientation by encouraging production and discouraging consumption so as to boost savings and investment for capital accumulation towards achieving the desired level of inclusive growth in Nigeria.*

**Key Words:** Foreign debt, accumulation, debt service payment and inclusive growth

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### 1.0 Introduction

#### 1.1 Background to the Study

Debt right from time immemorial has been a major source of livelihood for the government and individuals across most developing countries of the world. Obviously, most developing countries like Nigeria depend on foreign borrowing to finance her governmental projects which is characterized by low savings and investment (Ebi & Imoke, 2020). The provision of social and infrastructural facilities for the improvement of standard of living of citizens in developing countries among others include availability of financial resources, good governance, political will, external loan accessibility and interest

rate on loanable fund (Adepoju, Salawu & Obayelu, 2017). Nigeria like many other developing countries is indebted to the rest of the world as most of the countries such as; Madagascar, Burundi, Benin, Chad, Cameroon and Kenya are characterized by low savings, low investment and low capital accumulation (Rafindadi, & Musa, 2019). Hence, foreign debt becomes a wellspring of assets for capital accumulation which assists the attainment of desired level of inclusive growth in an economy. Nigerian economy had been indebted to numerous nations of the world through foreign debt accumulation which is used in boosting inclusive growth through the creation of opportunities for all the teeming population (Tajudeen, 2020). Thus,

economic growth generated through foreign debt has to be inclusive so as to ensure the wellbeing of the entire population. This is because inclusive growth requires full respect for human rights (Victor, Fefa & Mile, 2016).

Particularly, inclusive growth has long been recognized as economic growth distributed fairly across the populace to reduce poverty (Eboreime & Sunday, 2017). Thus, in order to reduce abject poverty through enhanced inclusive growth, Nigerian government year on year accumulated foreign debt. This debt stood at N438.89billion in 2007, N523.25billion in 2008, N590.44 billion in 2009, N689.84 billion in 2010, N896.85 billion in 2011, N1,026.90 billion in 2012, N1,387.33 billion in 2013, N1,631.50 billion in 2014, N2,111.51 billion in 2015, N3,478.91 billion in 2016, N5,787.51billion in 2017, and N7,759.20billion in 2018 (Central Bank of Nigeria, 2018). Succeeding foreign debt accumulation in Nigeria to reduce poverty, GDP per capita stood at N1131.147 billion in 2007, N6951376 billion in 2008, N857449 billion in 2009, N1091.968 billion in 2010, N527.2314 billion in 2011, N963.537 billion in 2012, N2514.1 billion in 2013, N2486.22 billion in 2014, N2739.852189 billion in 2015, N297.9 billion in 2016, N484.415 billion in 2017, N3203.244296 billion in 2018 and N2640.290739 billion in 2019 (World Bank, 2019).

Despite increase in foreign debt accumulation to boost GDP per capita of the populace, many Nigerians have been living below expectations as poverty based on income measurement stood at \$2.00 (World Bank, 2020). Foreign debt has important effect on the inclusive growth and investment of a country to the extent, increases the amount of foreign debt servicing affect the amount of inclusive growth as changes from engaging in private investment to repay the accumulated debts to the rest of the world (Umaru, Hamidu & Musa, 2013). Foreign debt is positively related to the inclusive growth rate of a nation if the amount

of the accumulated debt is minimal and vice versa. Notwithstanding government determination in handling the nation's debt, the focus of debt has still been a problem to the Nigerian economy.

## 1.2 Statement of the Problem

Foreign debt is supposed to enhance the recipient economy through increase in capital accumulation and production capacity, employment generation, new technology and knowledge, improvement of the country's balance of payments, new sales and marketing techniques, new business opportunities and high tax revenue to fill savings and investment gap. This is because most developing economies like Nigeria are characterized by low savings and investment (Ebi & Imoke, 2020). Obviously, Nigeria is currently ranked among Sub-Saharan Africa as one of the heavily indebted countries with a stunted GDP growth rate as its value stood at 0.8% in 2019 and -1.79% in 2020, retarded export growth rate, fast dwindling income per capita as its Gini index stood at 35.1% in 2019 and 43.4% in 2020 with an increasing poverty level (World Bank, 2020).

To this end, Victor, Joseph & Godoo (2020) submitted that the utilization of excessive borrowing from the rest of the world without appropriate planning for investment left the Nigerian economy in heavy debt burden and high debt service payment with a resultant effect of declining standard of living of her citizens. Looking at some of previous studies such as; Shkolnyk and Koilo (2018), Elwasila (2018) and Victor, Fefa and Mile (2016) in this area of research, much attention was given to the impact of external debt (foreign debt) on economic growth as a whole without any attempt on foreign debt accumulation and inclusive growth in Nigeria. It is against this backdrop the study examined the effect of foreign debt accumulation on inclusive growth in Nigeria.

### 1.3 Research Questions

The following questions guided the study

- i. What is the effect of foreign debt accumulation on inclusive growth in Nigeria?
- ii. What is the effect of foreign debt service payment on inclusive growth in Nigeria?

### 1.4 Objectives of the Study

The main objective of the study is to examine foreign debt accumulation and inclusive growth in Nigeria. The specific objectives are;

- i. To determine the effect of foreign debt accumulation on inclusive growth in Nigeria
- ii. To ascertain the effect of foreign debt service payment on inclusive growth in Nigeria

### 1.5 Hypotheses of the Study

For the purpose of answering the research questions, the following hypotheses in null form are raised. These include;

- i.  $H_{01}$ : Foreign debt accumulation has no significant effect on inclusive growth in Nigeria
- ii.  $H_{02}$ : Foreign debt service payment has no significant effect on inclusive growth in Nigeria

## 2.0 Literature Review

### 2.1 Conceptual Literature

#### 2.1.1 Foreign Debt

Conceptually, Audu (2014) viewed foreign debt as that part of the total debt that is owed to lenders outside the country. Foreign debt is a portion of a nation's debt incurred from the rest of the world. Foreign debt is the ratio of a country's debt that is acquired from foreign sources such as foreign corporations, government or financial institutions (Didia & Ayokunle, 2020). Foreign debt is a crucial

domestic financial resource when there is inadequate fund to enhance the consumption of public goods that raise the well-being to bring about economic growth (Yusuf & Saidatulakmal, 2021). Foreign debt is a fund obtained from other countries usually in other currencies from the rest of the world and is interest-bearing to finance specific project(s). Arnone, Bandiera and Presbitero (2015) conceptualized foreign debt as that part of a country's debt that was borrowed from foreign lenders including commercial banks, governments or international financial institutions. Foreign debt is the amount of money owed to non-residents repayable in terms of foreign currency, food or service (World Bank, 2004). Foreign debt is the amount of money owed by the government to the rest of the world (Hassan & Akhter, 2012).

#### 2.1.2 Foreign Debt Servicing

Foreign debt service payment refers to the payments due under foreign debt contracts. It includes the payment of interest as it becomes due, and redemption payments, this usually have an adverse effect on the Nigerian economy (Didia & Ayokunle, 2020). Foreign debt service payment is the amount of money required to make payments on the principal and interest on outstanding external loans (Audu, 2014). Foreign debt service payments are the sum of principal repayments and interest payments actually made in the year specified. Foreign debt service payment is the amount of money required in a given period to pay for the interest expense and principal of an existing foreign loan (Umaru, Hamidu & Musa, 2013).

#### 2.1.3 Inclusive Growth

Inclusive growth is a concept that advances equitable opportunities for economic participants during economic growth benefits incurred by every section of society (Özşahin & Uysal, 2017). Inclusive growth is economic growth that is distributed fairly across society and creates opportunities for all (Adu,

Marbuah & Mensah, 2013). Inclusive growth is that which strikes a balance between economic and sustainable development to create opportunities for all. Anyanwu and Oaiklem (1995) defined inclusive growth as the rise overtime in an economic capacity of nation to provide goods and services needed to revamp the social welfare of the citizenry. Element of inclusive growth include; poverty reduction, employment generation and increase in quantity and quality of employment, agriculture development, industrial development, social sector development, reduction in regional disparities, protecting the environment and equal distribution of income.

## 2.2 Theoretical Literature

### 2.2.1 Debt Overhang Theory

Myers (1977) stated that debt overhang occur when debt stock of a country is more than its future debt service payment. Hence, the nation's debt stock is over and above its capability to pay back the debt. Debt overhang theory occurs in a country if the debt to GDP ratio is high with low savings, low investment and decline in economic growth. Debt overhang theory stated that debt accumulation burden results to low private investment. Hence, decline in economic growth. This is because high debt stock performances causes high debt service payment, low private sector investment and poor economic growth.

### 2.2.2 The Dual-Gap Theory

Chenery and Bruno (1962) stated that the shortage of savings and investment to enhance economic growth results to external borrowing. The theory also stated that the economic growth of a country is determined by investment and the investment is necessitated by saving domestically (Oloyede, 2002). The theory also stated that excess import over export results to low savings and low investment. Hence, the gap between import and export leads to external borrowing.

This gap is therefore represented mathematically as demonstrated in Equation

$$[1] \quad \text{Investments-Savings}=\text{Import-Export}$$

The Equations [1] shows that excess import over export results to low savings and low investment. Thus, implies the reason for external borrowing by such country due to high ratio of import to export and low ratio of investment to savings.

### 2.2.3 Dependency Theory

Chenery (1956) propounded dependency theory. The theory states that the advanced nations employ foreign capital as a tool to enforce a progressive arrangement that is not harmonious with the domestic requirements of the developing countries. The theory also stresses that external borrowing serves as a modern-day slavery device whereby the Empire Countries demand more than what they have given in order to further enslave the developing countries (who were their former colonies) and rob them of the independence they claim to have gotten. These Empire Countries use inflows from debt servicing arrangement to further impoverish the developing countries, deny them of desired economic development while at the same time enlarging their empires to remain stronger, better and unbeatable. The consequence of reliance on external debt accumulation is that it becomes a mechanism through which industrialized countries exercise control over the unindustrialized nations by deciding the type of projects, level of expertise, equipment to be provided, number of expatriates and local workers, as well as all pricing decisions. In addition, the theory contends that the dependency on external funds gives rise to too much fund outflow referred to as debt servicing which takes away the meager resources of highly indebted poor countries as well as hinder their economic growth.

### 2.3 Empirical Literature

Yusuf and Saidatulakmal (2021) investigated the effect of government debt on Nigeria's economic growth using annual data from 1980 to 2018 and the Autoregressive Distributed Lag technique for data analysis. The empirical results showed that external debt constituted an impediment to long-term growth while its short-term effect was growth enhancing. Domestic debt had a significant positive impact on long-term growth while its short-term effect was negative. In the long term and short term, debt service payments led to growth retardation confirming debt overhang effect. The findings suggested that the government should direct the borrowed funds to the diversification of the productive base of the economy. This will improve long-term economic growth, expand the revenue base and strengthen the capacity to repay outstanding debts when due. Fiscal improvements that encourage domestic resource mobilization, efficient debt management strategies and reliance on domestic debt rather than external debt for increased deficit financing to engender greater growth are the main contribution of the study.

Didia and Ayokunle (2020) examined external debt, domestic debt and economic growth: the case of Nigeria utilizing data from the Central Bank of Nigeria, and the World Bank for the period of 1980-2016. The Vector Error Correction Model (VECM) was its estimation technique for data analysis. The study revealed that domestic debt has a statistically significant positive relationship with economic growth in the long run while external debt exhibiting a negative relationship with economic growth was not statistically significant. As a policy recommendation from this study, the Federal Government of Nigeria may want to start paying more attention to the mix of domestic debt and external debt in Nigeria's loan portfolio.

Egboi and Ajibo (2019) examined the effect of external debt burden on economic growth in Nigeria using time series data sourced from CBN Statistical Bulletin. The study used Ordinary Least Squares (OLS) estimation technique for data analysis. The variables of interest include; real GDP, money supply and external debt. The result revealed that external debt burden had a negative and insignificant effect on the Nigeria economic growth. Based on the findings the study recommends alternative sources of government revenue to be utilised fully for this will minimize over dependence of government on foreign debt and therefore foster economic growth.

Shkolnyk and Koilo (2018) examined the relationship between external debt and economic growth in Ukraine using time series data for the period of 2006 to 2016. The study employed econometric technique of Ordinary Least Squares for data analysis. The study based on the ordinary least squares results revealed that external debt is positively related to economic growth in Ukraine. The study concluded that increase in external debt resulted to increase in economic growth in Ukraine.

Elwasila (2018) examined the effect of external debt on the economic growth of Sudan using time series data for the period of 1969 to 2015. The study employed Vector Error Correction technique of (VECM) for data analysis. The study based on the results revealed that external debt had significant negative effect on economic growth in Sudan. The study concluded that increase in external debt resulted to decrease in economic growth in Sudan.

Victor, Fefa and Mile (2016) examined the relationship between external debt and economic growth in Nigeria using time series data for the period of 1981 to 2014. The study used ordinary least squares technique of estimation for data analysis. The study based

on the regression results revealed that external debt is positively related to economic growth while external debt service is negatively related to economic growth in Nigeria. The study concluded that increase in external debt resulted to increase in economic growth while increase in external debt service payment led to decrease in economic growth in Nigeria.

Mukui (2013) examined the impact of external debt and debt servicing payment on economic growth of Kenya using time series data for the period of 1980 to 2011. The study used Ordinary Least Squares for data analysis. The study based on the regression results revealed that external debt is positively related to economic growth while external debt service is negatively related to economic growth in Nigeria. The study concluded that increase in external debt resulted to increase in economic growth while increase in external debt service payment led to decrease in economic growth in Nigeria.

Ejigayehu (2013) examined the effect of external debt on the economic growth of eight selected heavily indebted African countries (Benin, Ethiopia, Mali, Madagascar, Mozambique, Senegal, Tanzania and Uganda) through the debt overhang and debt crowding out effect with ratio of external debt to gross national income as a proxy for debt overhang and debt service export ratio as a proxy for debt crowding out. Panel data covering the period 1991-2010 was used. The empirical investigation was carried out on a cross-sectional regression model with tests for stationarity using Augmented Dickey Fuller tests, heteroskedasticity and ordinary regression for data analysis. The concluding result from estimation showed that external debt affects economic growth through debt crowding out rather than debt overhang.

Siddique, Selvanathan, and Selvanathan (2015) examined the impact of foreign debt on economic growth in selected poor countries. The study made use of panel data estimation

of an ARDL model. The results revealed that the foreign debt of these poor countries had a negative impact on economic growth both in the long run and in the short run. The study also revealed that foreign debt service payment had negative impact on economic growth in the selected poor countries. The study concluded that increase in foreign debt and debt servicing payment led to decline in economic growth in the selected poor countries.

Saxena and Shaner (2015) examined the relationship between economic growth and external debt in India using time series data for the period of 1991 to 2015. The study utilized Ordinary Least Squares technique as its method of data analysis. The study revealed that economic growth and external debt are positively related in India. The study concluded that despite increase in economic growth India's economic still faced external debt stock.

Amos (2015) examined the impact of foreign debt on economic growth in Zimbabwe using time series data for the period of 1980 to 2013. Ordinary Least Squares (OLS) estimation technique was employed as the technique of analysis. The results indicated that external debt negatively impacted economic growth in Zimbabwe. The study concluded that increase in external debt resulted to decrease in economic growth in Zimbabwe.

Kasidi and Said (2013) examined the impact of external debt on the economic growth of Tanzania using time series data for the period of 1990 to 2010. The study used Ordinary Least Squares (OLS) method to analyze the data. The results showed that external debt stock had a significant positive impact on economic growth while external debt servicing exerted a significant negative impact on economic growth. The study concluded that increase in external debt resulted to increase in economic growth while

increase in external debt service payment led to decrease in economic growth in Tanzania.

Umaru, Hamidu and Musa (2013) studied the impact of external debt on economic growth in Nigeria within the time frame of 1970-2010. The study used Ordinary Least Squares method and granger causality. The result based on the Ordinary Least Squares revealed that external debt possessed a negative impact on economic growth while causality test revealed a bi-directional causation between external debt and economic growth in Nigeria. The study concluded that increase in external debt led to decrease in economic growth in Nigeria.

Rifaqat and Usman (2012) assessed the impact of external debt on the economic growth of Pakistan using time series data for the period of 1970-2010. The study employed Ordinary Least Squares (OLS) estimation technique. The study based on the findings revealed that external debt had a significant negative impact on economic growth in Pakistan. The study concluded that increase in external debt led to decrease in economic growth in Pakistan.

Ajayi and Okei (2012) examined foreign debt burden and economic growth and development of Nigeria. Ordinary Least Square (OLS) technique was used for the analysis. The result showed that foreign debt burden had a negative effect on the national income and per capita income of Nigeria. It was found that huge level of foreign debt acquisition brought about declined in economic growth and development in Nigeria. The study concluded that increase in foreign debt burden led to increase in economic growth and development in Nigeria.

Considering most of the extant studies reviewed in this area of research interest such as; Yusuf and Saidatulakmal (2021), Shkolnyk and Koilo (2018), Elwasila (2018) and Victor, Fefa and Mile (2016), much attention was given to the impact of external debt (foreign debt) on economic growth as a whole without

little attention given to foreign debt accumulation and inclusive growth in Nigeria. However, the macroeconomic objective of the government is not to achieve economic growth alone through borrowing, but to realize desired level of economic growth that can create opportunities for virtually all the teeming population. It is against this, the study examined the effect of foreign debt accumulation on inclusive growth in Nigeria using Autoregressive Distributed Lag Model to achieve the objectives of the study.

## 2.5 Theoretical Framework

The study of this nature is anchored on debt overhang theory propounded by Myers (1977). The study is anchored on this theory because it stated that debt overhang occurs when debt accumulated by a country is more than her future debt service payment. Hence, the nation's debt accumulated is over and above her capability to pay back the debt. Debt overhang theory also occurs in a country if the debt to Gross Domestic Product ratio is high with low savings, low investment and decline in growth rate. Debt overhang theory stated that debt accumulation burden results to low private investment which culminates into decline in growth expansion. This theory is applicable in the Nigeria context because Nigerian economy is stocked in foreign debt accumulation, but faced with reduction in the capacity and capability to service the debt due to both exogenous and endogenous factors. The framework of this theory is analytically expressed as showed in Equation [2];

$$[2] \quad Q_t = \pi_0 + \lambda_0 FD_t + \lambda_0 DSP_t$$

Where;  $Q_t$  represent growth rate,  $FD_t$  represents foreign debt and  $DSP$  represents debt service payment. This implies that growth rate of output in an economy is functionally determined by the amount of foreign debt and debt service payment.

### 3.0 METHODOLOGY

#### 3.1 Type and Sources of Data

The study utilized time series data for the period of 1981 to 2019, sourced from World Bank Popular Indicator database (2019) and CBN Statistical Bulletin, 2019. The study employed foreign debt (FRD), Foreign Debt Service Payment (FSP) and Exchange Rate (EXR) as the independent variables while inclusive growth was proxy by the sum of Gini coefficient and GDP per capita (SGG). The Autoregressive distributive lag (ARDL) was used as its technique of estimation. ARDL is a least squares regression approach involving the lag of both the endogenous variable and exogenous variables. ARDL model is normally denoted using ARDL notion ( $p_1, q_1, q_2, q_3, \dots, q_k$ ). P denotes the number of lags of the endogenous variable and  $q_1$  is the number of the lags of the first exogenous

variable, and  $q_k$  is the lags of the  $k^{th}$  exogenous variable.

#### 3.2 Model Specification

In building the ARDL model for the study, the functional, mathematical and stochastic forms of the model were presented in Equation [3], and [4] respectively.

$$[3] \quad SGG=F (FRD, FSP, EXR)$$

FRD represents foreign debt, FSP represents Foreign Debt Service Payment and EXR represents Exchange Rate as the independent variables while SGG represents the sum of Gini coefficient and GDP per capita as proxy inclusive growth.

The ARDL model was used to examine the impact of foreign debt on inclusive growth in Nigeria. The ARDL model based on the functional form in Equation [3] was represented as showed in Equation [4]

$$[4] \quad \Delta LSGG_t = \alpha_0 + \sum_{i=1}^p \delta_i \Delta LSGG_{t-1} + \sum_{k=0}^p \beta_k \Delta LFRD_{t-k} + \sum_{k=0}^p \epsilon_k \Delta LFSP_{t-k} \\ + \sum_{l=0}^p \gamma_l \Delta LEXR_{t-1} + \lambda_1 LSSG_{t-1} + \lambda_2 LFRD_{t-1} + \lambda_3 LFSP_{t-1} + \lambda_4 LEXR_{t-1} + \mu_t$$

Where  $\alpha_0$  and  $\mu_t$  is the autonomous component and white noise respectively. The expression with the signs of summation in the equation is error correction. The parameter coefficient denotes the short run effects while lambda ( $\lambda$ ) is the corresponding relationship in the long run.

#### 3.3 Method of Data Analysis

The study utilized Autoregressive Distributed Lag (ARDL) estimation technique to achieve objective one and two while Granger Causality test was used to achieve objective three of the study. The choice of the ARDL estimation technique is that it could be applied in the estimation process irrespective of the order of integration of the variables.



**Analysis of Data**

**Table 1:** Descriptive Statistics

|             | SGG      | FRD      | FSP      | EXR      |
|-------------|----------|----------|----------|----------|
| Skewness    | 5.260001 | 8.478574 | 3.497042 | 6.113166 |
| Jarque-Bera | 5.948250 | 7.239833 | 7.564767 | 4.604732 |
| Probability | 0.138883 | 0.017315 | 0.017315 | 0.01068  |
| Obs         | 39       | 39       | 39       | 39       |

**Source:** Researcher’s Computation, 2021

Table 1 indicated 39 observations for all the variables. Based on the descriptive statistic, all the variables were positively skewed. The Jarque-Bera result showed that individually, all the variables were not normally distributed. The result of their probability also confirmed

absence of normal distribution among individual variables since their p-values were less than 0.05 based on the rule of thumb. Due to this result, the need for the conduct of unit root test for stationarity.

**Table 2:** Unit Root Test Results

| Variables | ADF Statistic at level | ADF Statistic at first difference | Critical values of 5% at level | Critical values of 5% at first difference | P-values at level | P-values at first difference | Order of integration |
|-----------|------------------------|-----------------------------------|--------------------------------|---|-------------------|------------------------------|----------------------|
| SGG       | -1.353872              | -8.382392                         | 2.960411                       | -2.963972                                 | 0.5736            | 0.0002                       | I(1)                 |
| FRD       | -1.493736              | -6.398763                         | 2.960411                       | -2.963972                                 | 0.0765            | 0.0000                       | I(1)                 |
| FSP       | -3.487392              | -2.384738                         | 2.960411                       | -2.963972                                 | 0.0034            | 0.0456                       | I(0)                 |
| EXR       | -2.349839              | -5.483923                         | 2.960411                       | -2.963972                                 | 0.3458            | 0.0000                       | I(1)                 |

**Source:** Researcher’s Computation, 2021

The unit root test in Table 2 was conducted to account for the order of integration of the variables. It revealed that all other variables

were stationary at first difference except FSP that was stationary at level.

**Table 3:** Bound Co-integration Test

| F-Bounds Test  |       | Null Hypothesis: No levels relationship |      |      |
|----------------|-------|---|------|------|
| Test Statistic | Value | Signif.                                 | I(0) | I(1) |
| F-statistic    | 4.45  | 10%                                     | 1.89 | 2.89 |
| K              | 4     | 5%                                      | 2.17 | 3.23 |
|                |       | 1%                                      | 2.73 | 3.91 |

**Source:** Researcher’s Computation, 2021

Since the calculated F-statistic (4.45) is greater than the lower bound and upper bound critical values at 1%, 5% and 10% level of significance, the null hypothesis of no long-

run relationship among the variables of the selected ARDL(1,0,0,0) is to be rejected. Thus, the variables employed in this study are co-integrated.

Table 4: Estimated ARDL Model

Dependent Variable: D(LNSGG)

| Variable               | Coefficient | Std. Error                  | t-Statistic | Prob.  |
|------------------------|-------------|-----------------------------|-------------|--------|
| C                      | 0.658743    | 1.598473                    | 0.412108    | 0.7213 |
| <b>Short Run Model</b> |             |                             |             |        |
| D(LNSGG(-1))           | 0.345769    | 0.024763                    | 13.96313    | 0.0001 |
| D(LNFRD(-1))           | -0.529584   | 0.084349                    | -6.278486   | 0.0278 |
| D(LNFSP(-1))           | -0.474893   | 0.108732                    | -4.367556   | 0.0164 |
| D(LEXR(-1))            | -0.401348   | 0.064453                    | -6.226987   | 0.0019 |
| ECT(-1)                | -0.644983   | 0.091562                    | 7.044221    | 0.0093 |
| <b>Long Run Model</b>  |             |                             |             |        |
| LNSGG                  | 0.328749    | 0.287564                    | 1.143221    | 0.6213 |
| LNFRD                  | -0.457853   | 0.085153                    | -5.376828   | 0.0042 |
| LNFSP                  | -0.538473   | 0.074532                    | -7.224722   | 0.0152 |
| LNEXR                  | -0.483456   | 0.053463                    | -9.042815   | 0.0061 |
| R-squared              | 0.815764    | Durbin-Watson stat 1.745778 |             |        |
| Adjusted R-squared     | 0.508695    |                             |             |        |
| F-statistic            | 17.37483    |                             |             |        |
| Prob(F-statistic)      | 0.000002    |                             |             |        |

**Source:** Researcher’s Computation using Eviews 10, 2021

The result of the short run and the long run models in table 3 revealed that the independent

variables foreign debt, debt service payment and exchange rate explained about 82% of the

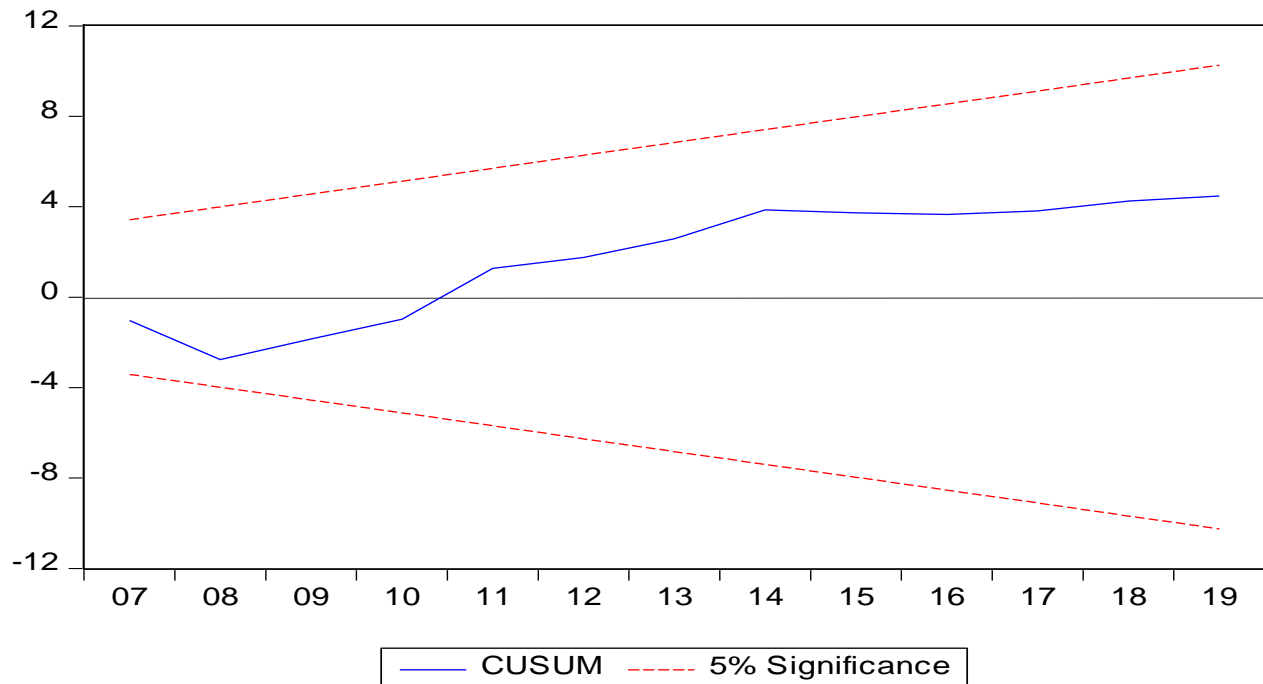
total variations in the sum of Gini coefficient and GDP per capita as proxy for inclusive growth while the remaining 19% unexplained is captured by the error term. Considering the prob (F-statistic) of 0.000002 the entire model is robust and is devoid of the presence of autocorrelation problem. The short run model accounts for the speed of adjustment to long run equilibrium of the variables employed. Hence, the speed of adjustment of the model to long run equilibrium is measured by the coefficient of the first lag of the error correction term (ECT (-1)).

The error correction term (-0.64) has the right a priori sign and it is statistically significant. Hence, the result of the ECT (-1) showed that 64% of the deviation of the variables in the short run will be restored in the long run within one year. Based on the long run form of the ARDL model, foreign debt has an estimated

coefficient of -0.46 meaning a 1% increase in foreign debt led to 46% decrease in the sum of Gini coefficient and GDP per capita in Nigeria. Hence, foreign debt had significant negative impact on inclusive growth in Nigeria within the study period.

Foreign debt service payment has an estimated coefficient of -0.54 meaning a 1% increase in foreign debt service payment led to 54% decrease in the sum of Gini coefficient and GDP per capita in Nigeria. Hence, foreign debt service payment had significant negative impact on inclusive growth in Nigeria within the study period. Exchange rate has estimated coefficients of -0.48. This implied that 1% increase in exchange rate led to 48% decrease in the sum of Gini coefficient and GDP per capita in Nigeria. This implied that increased in exchange rate led to decline in inclusive growth in Nigeria.

Fig 1.0: Stability Test: CUSUM test

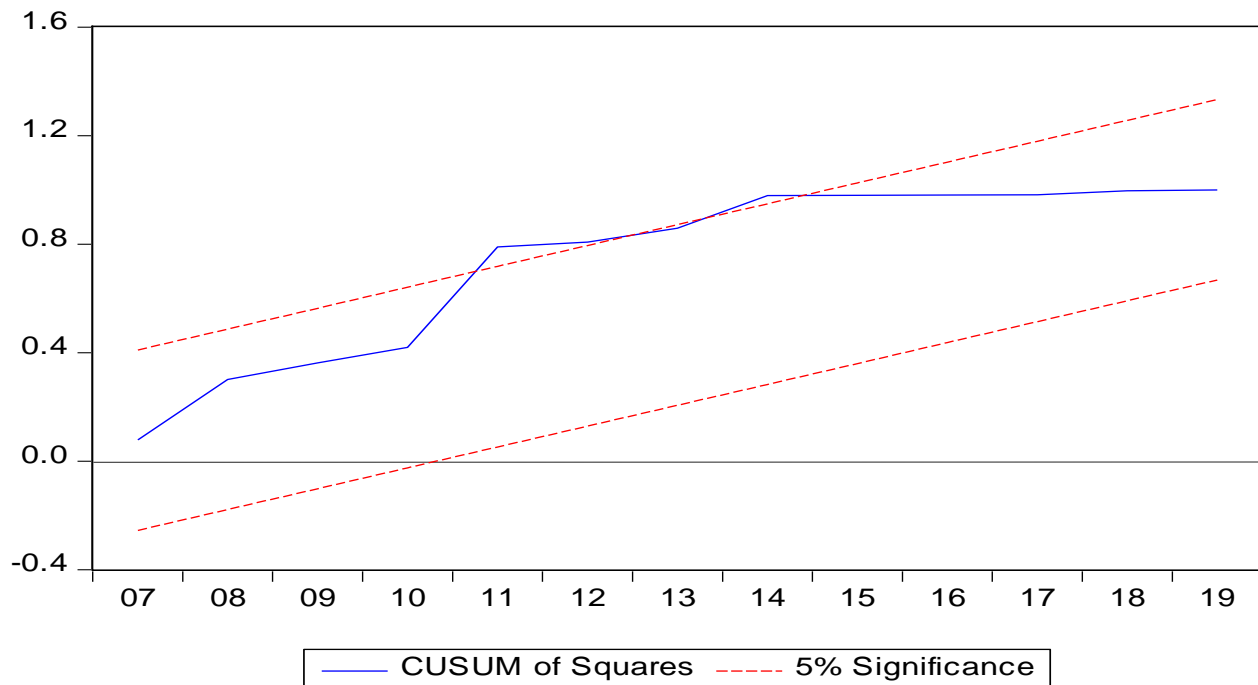


Source: Researcher’s Computation, 2021

The result of the CUSUM test in figure 1.0 which is the necessary condition for stability of a model shows that the blue lines lies inside

the dotted red line and it indicates that the model is dynamically stable at 5% level of significance.

Fig 1.1: Stability Test: CUSUM of Squares test



The result of the CUSUM of squares test in figure 1.1 which is the sufficient condition for stability of a model shows that the blue lines lies inside the dotted red line and it indicates that the model is dynamically stable at 5% level of significance.

**Conclusion**

Based on the findings, the study concluded that increase in foreign debt led to decrease in inclusive growth proxy by the sum of Gini coefficient and GDP per capita in Nigeria. The study also generalized that foreign debt had significant negative impact on inclusive growth in Nigeria within the study period. Furthermore, the study also concluded that increase in foreign debt service payment led to decrease in inclusive growth proxy by the sum of Gini coefficient and GDP per capita in Nigeria. Thus, foreign debt service payment had significant negative impact on inclusive growth in Nigeria within the study period. Finally, the study concluded that increase in exchange rate led to increase decrease in inclusive growth proxy by the sum of Gini

coefficient and GDP per capita in Nigeria. This implied that exchange rate had significant negative impact on inclusive growth in Nigeria.

**Recommendations**

From the result of the findings, the following recommendations were made.

- i. Nigerian government should ensure that borrowing from the rest of the world is reduced to the barest minimum level in order to achieve the desired level of economic growth in the Nigerian economy. This is necessary because as a country continues to borrow from the rest of the world, the productive capacity of economy might be reduced due to mismanagement of the foreign debt. Therefore, due to mismanagement and misappropriation of public fund such as foreign debt, there is need for the Nigerian government to change her borrowing orientation by encouraging production and discouraging consumption so as to boost savings and investment for capital

accumulation towards achieving the desired level of inclusive growth in Nigeria.

- ii. Nigerian government should ensure that borrowing from the rest of the world is reduced to the barest minimum level in order to minimize the level of service payment in terms of borrowing so as to achieve the desired level of inclusive growth. This is necessary because excessiveness of foreign debt increases foreign debt service payment to the rest of the world. Therefore, to attain desired level of inclusive growth in the Nigerian economy, there is every need for the government to reduce foreign debt vis-à-vis decline in foreign debt service payment in order to accomplish the desirable level of inclusive growth in Nigeria.

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