External Debt and Domestic Debt impact on the growth of the Nigerian Economy

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Abstract

The rationale for this paper is to establish the relationship between economic growth, external debt and domestic debt in Nigeria. Debt has become inevitable phenomenon in Nigeria, despite its oil wealth. This paper therefore is set to investigate the impact of external debt, and domestic debt on economic growth in Nigeria between 1970-2010 through the application of Ordinary least square method to establish a simple relationship between the variables under study, Augmented Dickey-Fuller technique in testing the unit root property of the series and Granger causality test of causation between GDP, external debt and domestic debt. The results of unit root suggest that all the variables in the model are stationary and the results of Causality suggest that there is a bi-directional causation between external debt and GDP while no causation existed between domestic debt and GDP as well no causation existed between external debt and domestic debt. The results of OLS also revealed that external debt possessed a negative impact on economic growth while domestic debt has impacted positively on economic growth (GDP). A good performance of an economy in terms of per capita growth may therefore be attributed to the level of domestic debt and not on the level of external debt in the country; therefore external debt is seen as inimical to the economic progress of a country. The paper found that domestic debts if properly manage can lead to high growth level. A major policy implication of this result is that concerted effort be made by policy makers to manage the debt effectively by channeling them to productive activities (real sector) so as to increase the level of output in Nigeria, hence achieving the desire level of growth. Another policy implication of the study is that most developing countries contract debt for selfish reasons rather than for the promotion of economic growth through investment in capital formation and other social overhead capital. Thus, the paper also recommends that government should rely more on domestic debt in stimulating growth rather than external debt. Government should formulate policies aimed at encouraging domestic savings vis-à-vis domestic investment. The need for borrowing is due to gap between domestic savings and investment; therefore, bridging the gap can be a likely solution to Nigeria's debt accumulation. For debt to promote growth in Nigeria and other highly indebted countries fiscal discipline and high sense of responsibility in handling public funds should be the Watchword of these countries' leaders. Debt can only be reduced to the barest minimum by increasing output level (GDP).

Keywords: External debt, Domestic debt, Economic growth (GDP) and Causality,.

1. Introduction

Likita (2000) defined debt as a contractual obligation of owing or accumulated borrowing with a promise to payback at a future date. Every economy requires an amount of capital to generate production and sustain development: capital, being a factor of production is particularly important but relatively scarce, and the dearth of capital is much more prevalent in developing countries which Nigeria happen to be among. A developing country wishing to mobilize capital resources to foster economic development may at one time or the other resort to borrowing. Foreign borrowing is needed to supplement domestic savings. But first, why do countries borrow? Borrowing is certainly as old as nations, countries borrow because of their inability to generate enough savings which could be used for investment and hence growth, part of the explanation of this argument is that the income of developing countries like Nigeria is quite low. It is so low that it is hardly adequate for personal consumption, individuals in Nigeria have very low saving habit, underdeveloped nature of the financial system all play a role in reducing savings. Countries borrow to promote economic growth and development, ensuring that there exists enabling environment for people to invest their money in other sectors of the economy. Borrowing is necessary to meet the financial requirement of the government. Where government has budget deficit, then the best alternative is to seek other sources (borrow) where such deficit can be eliminated. Government borrows in order to close the resource gap between savings and investment. In the last few years there had been alarming signals on the rising level of Nigerian domestic debt, which in the absence of appropriate measures might result to a looming catastrophe. Since the Obasanjo administration succeeded in looping $30 billion dollars debt off the Nigerian external debt, the country has become quite hopeful and relaxed about external borrowing. This has however, been the motivation that has led to the present Yar'dua's and Jonathan's administration to embark on a new external borrowing extravaganza, which seems to be a determined effort to take our external debt to its previous heights. Among the series of recent external debts are; twenty three billion dollar ($23b) sourced from Chinese banks to build three refineries and a petrol chemical complex, $2.2b loan from African Development Bank in 2009 to execute 46 projects and $915 m credit from the World Bank was just obtained as opined by Ogidan (2010). In the light of the recurring high debt, the World Bank Managing Director in a communiqué warned Nigeria to check its rising domestic debt because it could be harmful to the growth of the domestic economy. This was further buttressed by Ogidan (2010) that aside from the needed checks on foreign debt it is important to focus on issues relating to debt servicing and debts accumulation within the boundaries of the country. Also, Nwankwo (2011) opined in an interactive session that Nigerian domestic debt as attained 86.71% of the total debt as at 2011. He further emphasized that most of the internal debt was incurred through federal government bonds with maturity ranging from 3-20 years issued by DMO on a monthly basis. In the light of this escalating and disturbing domestic debt growth rate and given the priority of current government at making Nigeria one of the largest 20 economies in the world by the year 2020 in line with the vision 2020 objectives, it is important to investigate the effect of public debt on economic growth in Nigeria. Apart from the above, there exist contrasting views in the literatures

relating to whether foreign debt affects economic growth more than the domestic debt", or that both domestic debt and external debt influences a country's economic growth. Some studies like Audu and Abula (2001) are of the view that it is only domestic debt that influences growth and not foreign debt and vice-versa. Thus, there is therefore the need to examine the individual and combined effect of internal and external debt in Nigeria, to enhance proper policy recommendation to the government.

Debt is one of the sources of financing capital formation in any economy. Adepoju et al. (2007) note that developing countries in Africa are characterized by inadequate internal capital formation due to the vicious circle of low productivity, low income, and low savings. Therefore, this situation calls for technical, managerial, and financial support from Western countries to bridge the resource gap. On the other hand, external debt acts as a major constraint to capital formation in developing nations. The burden and dynamics of external debt show that they do not contribute significantly to financing economic development in developing countries. In most cases, debt accumulates because of the servicing requirements and the principal itself. In view of the above, external debt becomes a self-perpetuating mechanism of poverty aggravation, work over-exploitation, and a constraint on development in developing economies (Nakatami & Herera, 2007).Like most developing countries of the world, Nigeria relies substantially on external funds for financing its development projects – iron and steel mills, roads, electricity generation plants etc. Such external funding usually takes the form of external loans. In the early years of political independence (i.e. 1960 through 1975), the size of such loans was small, the rate of interest concessionary, the maturity was long-term, and the source was usually bilateral or multilateral in nature. For instance, Nigeria's external debt in 1960 was about $150 million; however, beginning in the year 1978, the situation changed. Nigeria, at the lure of the international financial centers, started to borrow huge sums from private sources at floating rates and with shorter-term maturities. The 1978 "jumbo loan" alone was estimated at some US $1 billion. By 1982, the value of Nigeria's external indebtedness was US $18.631 billion, which represented over 160% of Nigeria's gross domestic product (GDP) for that year. The situation precipitated a debt-crisis that progressively worsened over time. By 1986, Nigeria had to adopt a World Bank/International Monetary Fund (IMF) sponsored Structural Adjustment Program (SAP), with a view to revamping the economy and making the country better-able to service her debt. Inflation has been on the increase in Nigeria due partly as a result of high debt accumulation and partly due to ineffective policies put in place by the government, for instance the increase in minimum wage of recent from seven thousand five hundred naira (N 7,500) to eighteen thousand naira (N 18,000). Maintenance of price stability continues to be overriding objective of monetary policy for most countries in the world today, especially in Nigeria. The emphasis given to price stability in conduct of monetary policy is with a view to promoting sustainable growth and development as well as strengthening the purchasing power of the domestic currency amongst others. This paper, therefore, seek to examine the effect of debt (external and domestic) on the growth of the Nigerian economy.

2. Theoretical Framework

According to Likita (2000), Government borrows in order to close the resource gap between savings and investment. The absence of adequate savings creates a difference between the actual level of required domestic savings for investment and actual investment. The low savings can be seen as a constraint to investment because the mechanism where savings translate itself into investment will not exist; therefore conscious effort must be made by the government to eliminate such gap. Adam Smith (1776) attributes external debt to three influences:- first, the desire of the government official to spend, second, the unpopularity of increasing taxes, and thirdly, the willingness of capitalist to lend. In this way he sees the government debt as accompany of commercial or capitalist society. Adam Smith said that increasing deficits would in the long run probably ruin the great nation. That government borrowing encourages wastes during peace and leads to reckless waging of war. Debt results in higher taxes and inflation which rewards spending-tariffs and pushes savers. It weakens the productive capacity of the people and eventually weakens or destroys even the wealthy nation. In the opinion of Karl max (1883) external debt results in the exploitation of labor which creates a class of laziness, and it results in the central banks who granted special privileges in return for lending to state. It encourages higher taxation and tax collectors in order to pay the national debt. Rudger Dombush and Stanley Fisher (1978) also pointed that, the national debt is a direct consequences of past deficit in the Federal budget. The national debt increases when there is a budget deficit and decreases when the economy experience budget surplus. They came up with the following equation for budget deficit: - DF = (Go + R) – T = BUS; where DF is budget deficit, Go is government spending on goods and services, T is spending on transfer, BUS is budget surplus, and (Go + R) is total government spending. The above theories reveal that the relationship between external debt and growth is negative.

3. Conceptual Framework

Debt is created by the act of borrowing. Likita (2000) defined debt as a contractual obligation of owing or accumulated borrowing with a promise to payback at a future date. Every economy requires an amount of capital to generate production and sustain development: capital, being a factor of production is particularly important but relatively scarce, and the dearth of capital is much more prevalent in developing countries which Nigeria happen to be among. It is defined according to Oyejide (1985) as the resource or money use in an organization which is not contributed by its owner and does not in any other way belong to them. It is a liability represented by a financial instrument or other formal equivalent. In modern law, debt has no precise fixed meaning and may be regarded essentially as that which one person legally owes to another or an obligation that is enforceable by legal action to make payment of money. When government borrows, the debt is a public debt. Public debts are either internal or external, incurred by the government through borrowing in the domestic and international markets so as to finance domestic investment. Debts are classified into two i.e. productive debt and dead weight debt. When a loan is obtained to enable the state or nation to purchase some sort of assets, the

debt is said to be productive e.g. money borrowed for acquiring factories, electricity, refineries etc. However, debt undertaken to finance wars and expenses on current expenditures are dead weight debts. When a country obtains a loan from abroad, it means that the country can import from abroad goods and services to the value of the loan without at the same time having to export anything for exchange. When capital and interest have to be repaid, the same country will have to get the burden of exporting goods and service without receiving any imports in exchange. Internal loans do not have the type of burden exchange of goods and services. These two types of debt, however, require that the borrowers' future savings must cover the interest and principal payment (debt servicing). The early eighties was a disastrous period for Nigeria. Two events characterized external borrowing during this period. www.sciedu.ca/ijfr International Journal of Financial Research Vol. 1, No. 1; December 2010 Published by Sciedu Press 3 First there was an emergence of import oriented consumption pattern which made the federal and state governments to go into external borrowing.

Second, funds realized from these loans were invested on unproductive ventures. Towards the end of 1970 the level of external debt of Nigeria increased rapidly and the services of the debt in terms of payment of interest and principal posed severe pressure on the balance of payments (BOP) of the country. Nigeria oil boom could rightly, be traced to the mid-seventies when there was crisis in the Middle East which led to an increase demand and sale of Nigeria oil. This resulted in considerable foreign exchange earnings by the government. However, towards the close of the decade, the international oil market started experiencing a glut and the prices of oil fell drastically low. Some concerned Nigeria planners reasoned rationally that the economy was in total brink of collapse. To avoid economic problems like inflation, political and social crisis inherent in the period (1980-1985) the government of Shagari opened the gate way to external borrowing. Actually, the borrowing was done with the hope that there would be a turnaround in the international oil market perhaps in no distance future. It was equally, hoped that the borrowed external fund would be a turnaround in the purchasing domestic goods. However; the expected turn around did not materialize. Rather it came to a point that the amount borrowed (that is external debt) was greater than the national income. To pay the principal becomes a problem and the interest kept on compounding thus reaching a point where the international leaders refused bluntly to lend to Nigeria. As if that was not enough the International Monetary Fund (IMF) stipulated stringent conditions under which they would grant Nigeria further loans.

Nigeria in her desperate quest for money to finance economic growth accepted the foreign loan under those stringent conditions. But these conditions such as devaluation, amongst others hardly improved Nigeria's ability to pay the loan and resulted to what could be termed as external debt crisis. In order to realize the objectives of the study the paper is divided into five sections. Section one is the introduction, section two is an overview of external debt and external debt management policies in Nigeria. The third section captures the research methodology. This is followed exclusively by data analysis and discussion of findings. The remaining section of the paper draws some managerial implications that emerge from the discussion.

Sources of public debt 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 according to Likita (2000), 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.

Types and causes of public debts According to Likita (2000) the types of debt are: Balance of payment support Loans, Trade debts, Project-tied Loans and socio-economic Loans. The causes of public debts are; oil price shocks, structure of the loans, project viability, rise in interest rate, international economic recession, neglect of non-oil sector.

4. Empirical Framework/Review of empirical studies

Empirical studies on debt-economic growth relationship are numerous in the literature in both developed and developing countries. Theoretically, it is expected that the marginal product of capital should be higher than the world interest rate for developing countries. Then, such countries would benefit from external borrowing (Eaton, 1993). However, external debt only helps to exploit the potentials of a country, it does not enhance it. Therefore, the only guideline is that the rate of return on spending should exceed the marginal cost of borrowing on the assumption that debt is paid (Indermit and Brian, 2005).

Fischer (1993) while explaining the deficit-debt-growth relationship posited that larger budget surpluses are associated with more rapid growth through greater capital accumulation and greater productivity growth. He posited further that, high deficit may be consistent with low inflation for a while, but that a more detailed assessment of debt dynamics may be needed to see if the deficit is sustainable and therefore consistent with macroeconomic stability.

Aminu and Anono (2012) conducted a study on external debt relationship in Nigeria and found that external debt impacted positively on the growth of the economy within the period under review. And that external debt does not cause GDP, but the flow of causation runs from GDP to external debt. Savvides (1992) while trying to measure the impact of debt overhang on the country's economic performance used a Two Stage Limited Dependent Variable model (2SLDV) procedure by cross section time series data from 43 Less Developing Countries (LDCs) encountering debt problem .The study concludes that debt overhang and decreasing foreign capital flows have significant negative effect on investment rates. In line with Savvides (1992), Deshpande (1997) attempted to explain the debt overhang hypothesis by an empirical examination of the investment experience of 13 severely indebted countries. The author argues that the adjustment measures, which are applied by severely indebted countries, have an impact on the indebted countries, since the investment crisis has typically implied a growth crisis for the highly indebted countries. Bauerfreund's (1989) findings also show that external debt payments

obligations reduced investment levels in Turkey, in 1985. He asserted that the debt overhang is as a result of both internal and external economic policies.

Cohen (1993) estimated an investment equation for a sample of 81 developing countries over three sub periods using O.L.S method. The author shows that the level of debt does not explain the slowdown of investment in highly rescheduling developing countries.

Warner (1992) tried to measure the size of debt crisis effect on investment with Least Square estimation for 13 less developed countries over the period 1982-1989. He affirmed that the reasons behind the decline of investment in many heavily indebted countries are declining export prices, high world interest rates and sluggish growth in developed countries. Rockerbie (1994) criticized Warner (1992) of various shortcomings. Rockerbie (1994) used O.L.S for each of the 13 countries over a sample period 1965-1990 and the results affirm that the debt crisis of 1982 had significant effects in terms of dramatic slowdown of domestic investment in less developed countries. Afxentiou and Serietis (1996) in furtherance to Afxentiou (1993) examined 55 developing countries facing debt service difficulties. The study's objective was to find out the relationship between foreign borrowing and productivity over the period 1970-1990. The results show that during the period 1970-1980, the relationship between indebtedness and national productivity is not negative. They submitted that the developing countries used the foreign loans to absorb the shock from oil price increases as painless as possible. However, for the period 1980-1990 when the debt forgiveness and rescheduling started, the debt crisis and debt overhang affected some indebted countries economic growth.

Fosu (1996) tested the relationship between economic growth and external debt in sub Saharan African countries over the period 1970-1986 using O.L.S method. The study examined the direct and indirect effect of debt hypothesis. Using a debt- burden measure, the study reveals that direct effect of debt hypothesis shows that GDP is negatively influenced via a diminishing marginal productivity of capital. The study also finds that on the average a high debt country faces about one percent reductions in GDP growth annually. Fosu (1999) also employed an augmented production function to investigate the impact of external debt on economic growth in sub Saharan African countries for the period1980-1990. The author tested whether external debt has negative effect on economic growth and the findings show that debt exhibits a negative coefficient. Cunningham (1993) examined the association between debt burden and economic growth for 16 heavily indebted nations during the period 1971-1987. The study concludes that the growth of a nation's debt burden had negative effect on economic growth during the period 1971-1979. Smyth and Hsing (1995) tried to test the impact of federal government's debt on economic growth and examine if the optimal debt ratio exists that will maximize growth.

The debt/GDP ratio corresponding to the maximum GDP growth rate was found to be 38.4%. The results show that during 1980s and early 1990s, federal debt has a different role in economic growth. In the early 1980s, debt ratio rose but it was below 38.4, thus debt-financing stimulates economic growth.

Debt-economic growth nexus has also found significance among several other scholars. Essien and Onwioduokit (1998) examine the impact of foreign debt on economic growth and they found that the degree of responsiveness of growth to external finance in Nigeria is elastic. By implication government should only put in place appropriate debt management strategies to enhance economic growth. The debt burden of a country and the consequent debt service impose a constraint on the economy in terms of insufficient foreign exchange to finance importation of raw materials and capital goods needed for economic growth. Another serious constraint is found in debt overhang theory which states that accumulated debt burden adversely affect the rate of private investment. The debt stock acts as a tax on future income and production and discourages investment by the private sector. Studies including Sach's (1986) have made a theoretical case for debt overhang effect by analyzing the crowding out effect of debt on service payments. They posit that many highly indebted poor countries frequently divert foreign exchange resources to meet pressing debt service obligation. Of interest to policy makers presently is the effect of the debt relief granted some African countries and as put by Burnside and Fanizza (2004), it differs from previous major debt relief initiatives in that it requires that budgetary resources saved from debt service be used for poverty reduction purposes. This view however need be interpreted with caution as many countries in Africa have specific - country problems which may not allow the impact of the debt reduction be felt by the common man. For example in Nigeria, rather than having a positive feel of the debt relief, the standard of living of an average Nigeria has worsened due to escalating prices of essential commodities and growing food shortages. In the findings of Iyoha (2000), he opines that a 75% debt stock reduction would have raised the investment - GDP ratio by 8.6% and increased GDP by7.8% and the debt/GNP ratio would have fallen by 65%.No doubt, the debt reduction is expected to promote growth. In a study conducted by Chauvin and Kraay (2005) on a sample of 62 low-income countries assessed the extent to which debt relief induces government to embark on social spending. They conclude that the marginal benefits of debt relief may not be same in Africa, Latin America and Asia. Lora and Olivera (2006) test the crowding out effect of public debt on social services between 1985 and 2003 and find that the effect comes mostly from stock of debt and not debt service. They posit that loans from multilateral organization do not ameliorate the adverse consequences of debt on social expenditures. Thus, if Lora and Olivera's (2006) results hold for Africa, beneficiaries of debt relief should have increased their expenditure in the social sector (Dessy and Vencatachellum, 2007). Evidences from (Dessy and Vencatachellum, 2007) study however show that if a government has a high discount factor, it will rather consume than invest once debt relief is granted. This is particularly true of most developing countries that have high marginal propensity to import. These findings are consistent with Cooper and Sachs (1985) and Arslanalp and Henry (2004) who argue that the problem faced by debt-relieved countries is lack of good institutions. Thus, if the status-quo remains the same, the new debt-relief initiative would not achieve their objectives to increase growth promoting expenditure in these countries. Similar studies that have found relationship between debt and growth include Cohen (1995), Bovensztem (1990), Elbadawiet al. (1997) and Patilloet al. (2002, 2003). Few other studies did not find a

significant effect of debt on growth and they include Savvides (1992) and Dijkstra and Hermes (2001).On causality analysis of external debt and growth, Afxentiou and Serletis (1996a) used Granger causality test on a sample of 55 severely indebted countries and the results affirm that no causality exists between debt and income. The tests show that indebtedness is not a specific factor of per capital income growth. Hence, foreign resources can have a positive effect on economic development if resources are transferred into inputs since borrowing countries need to have these scarce resources. Amoateng and Amoako (1996) investigated the relationship between external debt and growth for 35African countries using Granger causality test. The results show that there is a unidirectional and positive causal relationship between debt service and economic growth.

Chowdhury (1994) tried to resolve the Bullow and Rogof's (1990) proposition by finding the cause andeffect relationship between external debt and economic slowdown in 7 Asian countries for the period 1970-1988.The results of the Granger causality tests show that the Bullow and Rogof (1990) propositions that external debt of developing countries are a symptom rather than a cause of economic slowdown was rejected. The results confirm a feedback or bi-directional relationship between debt and growth for Malaysia and Philippines. Karagol (2002) investigated the long run and short run relationship between external debt and economic growth for Turkey during 1956-1996 and the Granger causality test results showed a unidirectional causality from debt to economic growth.

5. Methodology of Analysis

The data used for this paper are basically time series data covering 1970– 2011, that is thirty two (42) years. The data were sourced from Central Bank Nigeria (CBN) Statistical Bulletin and annual report.

Econometric Model specification

Model 1 Following Solow (2000) external debt and domestic debt are considered as independent factor of production to replace labor and capital used. This is presented in Solow growth model with constant returns to scale as:

GDP = αEXTDEBT B1DOMDEBT B2μ -- (1)

Where GDP is defined as gross domestic product (output),

α is the total factor productivity;

EXTDEBT is the rate of external debt in Nigeria;

B1and B2 are the constant elasticity coefficient of external debt and domestic debt respectively.

The logarithmic conversion of the equation above yields the structural form of growth model as:

LOGGDP = LOGα + B1LOGEXTDEBT + B2LOGDOMDEBT +LOGμ---------------------- (2)

Where LOGGDP = Log of Gross Domestic Product.

LOGα = B0 is the intercept.

LOGEXTDEBT = Log of external debt.

LOGDOMDEBT= Log of domestic debt.

Logμ = Log of white noise error term which is assume to be 1. μ = white noise error term.

Appropriate Expectation: B0> 0, B1>0, B2>0.

MODEL II: CAUSALITY MODEL

The model of causality test is thus specified as follows:

LOGGDP = $\sum \phi i$ LOGEXTDEBTt-1 + $\sum \phi j$ LOGDOMDEBTt-1 + $\sum \phi k$ LOGGDPt-1 + μt1 ----1

LOGEXTDEBT = $\sum \alpha i$LOGEXTDEBTt-1 + $\sum \alpha j$LOGDOMDEBTt-1 + $\sum \alpha k$LOGGDPt-1 + μt2 ---------------2

LOGDOMDEBT = $\sum \beta i$LOGEXTDEBTt-1 + $\sum \beta i$LOGDOMDEBTt-1 + $\sum \beta k$LOGGDPt-1 + μt3 ---------------- 3

Decision rule: The decision rule for equations (1) (2) and (3) under causality model is test of null hypothesis that the estimated coefficients are equal to zero at an appropriate level of significance or using the rule of thumb that if t-statistic is at least 2 the null hypothesis is rejected otherwise accepted. Therefore,

Equation (1) EXTDEBT or DOMDEBT causes GDP if Ho: ϕi, ϕj, = 0 is rejected.

Equation (2) GDP or DOMDEBT causes EXTDEBT if Ho: αi, αk = 0 is rejected.

Equation (3) GDP or EXTDEBT causes DOMDEBT if Ho: βi, βk, = 0 is rejected.

However, if the estimates of the parameter turn up with signs or size not conforming to economic theory, they should be rejected, unless there is a good reason to believe that in the particular instance, the principles of economic theory do not hold.

Econometric Diagnostic test

Unit Root Test Macroeconomic time series data are generally characterized by stochastic trend which can be removed by differencing. Thus, this paper used or adopt Augmented Dickey-Fuller (ADF) Techniques to test and verify the unit root property of the series and stationary of the model.

Causality Test: In order to determine which variable in the model cause which, Granger causality test is used. The F statistics is used to reject or accept the null hypothesis of no causation between the variables when F statistics is greater than 2 and less than 2 respectively.

6. Results and Discussion

Multiple Regression Results Table

Table 2 in appendix contains multiple regression results for the growth model. The results indicate that the coefficient of external debt and the constant are both statistically insignificant, while the coefficient of domestic debt is found to be statistically significant. Precisely, the coefficient of external debt is found to be statistically insignificant at 12 percent level as indicated by its probability value 0.2108 and not rightly signed (negative), while the coefficient of domestic debt is found to be statistically significant at 1 percent level as indicated by its probability value 0.0000. The low probability value implies that the presence of that effect that can invalidate the parameter is low (1 percent). This therefore, implies that a unit change in external debt would reduce the economic growth (GDP) by 0.41 units and a unit change in domestic debt would raise the performance of the economy by 7.97units. The coefficient of external debt is statistically insignificant and is inconsistent with the theoretical expectation and found to be negative (i.e. B1> 0), while the coefficient of domestic debt is found to be statistically significant and consistent with the theoretical expectation. The F-statistics 293.0206, which is a measure of the joint significance of the explanatory variables, is found to be statistically significant at 1 percent level as indicated by the corresponding probability value 0.000000.

The R^2 0.9391 (93.91%) implies that 93.91 percent total variation in economic growth (GDP) is explained by the regression equation. Coincidentally, the goodness of fit of the regression remained too high after adjusting for the degree of freedom as indicated by the adjusted R^2 (R^2 = 0.9359 or 93.59%). The Durbin-Watson statistic 0.6613 in the table is observed to be lower than R^2 0.9391 indicating that the model is spurious (meaningless), and implies that there is presence of serial correlation. This therefore justified the need for unit root test.

Table 3 reveals regression result after taking the natural log of the model. The coefficients of both external debt and domestic debt, including the constant are statistically significant. Precisely, the coefficient external debt, domestic debt are both found to be statistically significant at 1 percent level as indicated by probability value of 0.0003 and 0.0000, but coefficient of external debt is not consistent with the theoretical expectation while the coefficient of domestic debt is rightly signed and consistent with the theoretical expectation. This implies that 1 change in external debt would reduce GDP by 0.26, while a 1 percent change in domestic debt raises GDP by 1.31 percent. The F-statistics 693.89, which is a measure of the joint significance of the explanatory variables, is found to be statistically significant at 1 percent level as indicated by the corresponding probability value 0.000000.

Table 3.1 contains correlation coefficients. The results of correlation revealed that external debt is 89.6 percent related to GDP as indicated by its value 0.895951, while domestic debt is 98.1 percent related to GDP as indicated by its value 0.980891. This indicates that GDP is more correlated to domestic debt than external debt. The result further revealed that the correlation between external debt and domestic debt is very high as indicated by its correlation value 0.947806 which shows that external debt and domestic debt are 94.78 percent correlated.

The R2 0.9733 (97.33%) implies that 97.33 percent total variation in economic growth (GDP) is explained by the regression equation. Coincidentally, the goodness of fit of the regression remained too high after adjusting for the degree of freedom as indicated by the adjusted R2 (R2 = 0.9720 or 97.20%). The Durbin-Watson statistic 0.4293 in the table is observed to be lower than R2 0.9733 indicating that the model is spurious (meaningless), and implies that there is presence of serial correlation. This therefore further justified the need for unit root test.

The results of unit root test are contained in table 4,5 and 6 in the appendix. The results revealed that all the variables of the model are found to be stationary at both 1 percent, 5percent, and 10 percent level with first difference (d(1)), which is indicated by ADF results at all levels less than the critical values in negative direction. The ADF value for GDP is -5.4411 and the critical values are -3.6105, -2.9390 and 2.6079 at 1, 5, and 10 percent respectively. The ADF value for EXTDEBT is -4.4926 and the critical values are -3.6105, -2.9390, and -2.6079at 1, 5, and 10 percent respectively. The ADF value for DOMDEBT is -4.7564 and the critical values are -3.6105, -2.9390, and -2.6079at 1, 5, and 10 percent respectively. The null hypotheses of presence of unit root are both rejected at 1 percent level indicated by their probability value 0.0001, 0.0004 and 0.0009 respectively.

The results of causality are contained in table 7 in appendix. The results revealed that there is a bi directional causation between external debt and GDP; the null hypothesis is rejected at 10 percent indicated by the probability value 0.0849. This is confirmed by the F-statistics value 2.6537 and 2.5559 respectively The results also revealed that there has not existed causation between domestic debt and GDP, the null hypothesis is accepted at 25.65 and 57.13 percent indicated by the high probability value 0.2565 and 0.5713, this is confirmed by the F-statistics value 1.4166 and 0.5691 respectively. The result further revealed no causation existed between external debt and domestic debt, the null hypothesis is accepted at 87.54 and 70.32 percent indicated by the high probability value 0.8754 and 0.7032, this is confirmed by the F-statistics value 0.1336 and 0.3558 respectively.

7. Conclusion

The main objective of this study is to specifically examine the impact of domestic debt and External Debt on economic growth in Nigeria from1970-2010. Ordinary least square method was used to establish a simple relationship between the variables under study. The results revealed that external debt possessed negative impact on the economic performance of Nigeria while

domestic debt possessed positive impact on economic growth through encouraging productivity and output level and on evolution of total factor productivity. A good performance of an economy in terms of per capita growth may therefore be attributed to the level of domestic debt and not on the level of external debt in the country; therefore external debt is seen as inimical to the economic progress of a country. The paper found that domestic debts if properly manage can lead to high growth level. A major policy implication of this result is that concerted effort be made by policy makers to manage the debt effectively by channeling them to productive activities (real sector) so as to increase the level of output in Nigeria, hence achieving the desire level of growth. Another policy implication of the study is that most developing countries contract debt for selfish reasons rather than for the promotion of economic growth through investment in capital formation and other social overhead capital. For debt to promote growth in Nigeria and other highly indebted countries fiscal discipline and high sense of responsibility in handling public funds should be the Watchword of these countries' leaders. External debt can only be reduced to the barest minimum by increasing output level (GDP).

8. Recommendation

The policy implication of this result is that domestic debt rather than external debt will stimulate economic growth in Nigeria. This is because the repayment of the principal and interest on such internal debt is a reinvestment into the domestic which would usually have a chain investment effect on the domestic economy. But with respect to external debt, more resources will be needed to repay and service the debt and this would impair the positive effect of this debt on economic growth. Thus, the paper recommends that government should rely more on domestic debt in stimulating growth rather than external debt. Government should formulate policies aimed at encouraging domestic savings vis-à-vis domestic investment. The need for borrowing is due to gap between domestic savings and investment; therefore, bridging the gap can be a likely solution to Nigeria's debt accumulation.

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