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# FOREIGN AID, DEBT AND GROWTH NEXUS IN NIGERIA

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## ABSTRACT

Foreign aid and debt are viable sources of financing government deficits as well as projects and programmes. This article examined the impact of foreign aid, external debt and domestic debt on economic growth in Nigeria for the period 1981-2010. Co-integration and error correction mechanism were employed to determine the long run relationship among the variables and correct for disequilibrium in the short run. The parsimonious error correction results show a positive relationship between the dependent variable, domestic debt and foreign aids. On the other hand, there is a negative relationship between economic growth rate and external debt. An increase in domestic debt and foreign aid inflows brought about 2.5 and 0.79 percent economic growth respectively. However, the model had a poor fit. The conditions for foreign aid should have broader participation by recipients. In addition, donors should harmonize and coordinate their various processes of initiating, implementing and monitoring projects as recipient countries find it very difficult to coordinate such numerous flows. Government should improve her revenue mobilization base and debt should be within its budgeted or international threshold.

## JEL CLASSIFICATION & KEYWORDS

■ C20 ■ C22 ■ F35 ■ F43 ■ H63 ■ FOREIGN AID ■ EXTERNAL DEBT ■ DOMESTIC DEBT ■ ECONOMIC GROWTH

## INTRODUCTION

Aid from whatever source is aimed at enhancing economic progress in the recipient country. It is the belief of many economists that there is a positive relationship between aid and growth. This is the main reason why most aids are tied to specific projects or targets. The United States currently provides $0.15 in foreign assistance for every $100 in gross national income, as against an average of more than $0.80 in the Scandinavian countries. About 20 percent of U.S. foreign aid goes to about four countries: Egypt, Pakistan, Jordan, and Colombia. American assistance to Africa in 2003-exclusive of that related to emergencies, military assistance, debt service, and research amounted to about $1 billion (Werlin, 2005). Between 1989 and 2003, the donor community provided $200 billion in debt relief to developing countries. China as an emerging economy has renewed efforts in providing foreign aid to developing nations in the last decade. Nigeria since independence has being a major beneficiary of such benevolence from the international community especially the United States to Sub-Saharan Africa and recently from China.

The last goal, that is, Goal 8 of the Millennium Development Goals is to develop a global partnership for development. Although this goal is aimed at integrating the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources, it also encourages developed countries to increase the level of official development assistance to developing countries.

Most times, scarcity of resources to achieve macroeconomic goals prompts governments of Third World countries to rely on foreign aid and borrowing. Specifically, governments' reasons for both domestic and external debts have been: budget deficit financing, implementation of monetary policy (buying and selling of treasury bills in the open market), development of the financial sector (deepening of the financial sector), large public expenditure growth, narrow revenue base and low output growth.

Over the years, Nigeria met its debt commitment through regular servicing; this had been done at the expense of key social services such as health, education, water and sanitation. This tide of huge debt servicing was assuaged after the 2005 debt relief by the Paris Club and other independent lenders.

Nigeria has spent immensely in debt servicing. Currently, the level of external debt is considerably low. However, attention has shifted to domestic borrowing which increases multiplicatively every year.

Both foreign aid and public debt are important sources of revenue to the government for building needed infrastructure which is requisite to stimulate economic progress. In this light, the article has two objectives (i) to analyze the effects of foreign aid and debt on economic growth, and (ii) to examine the association between foreign aid and economic growth as well as between debt and economic growth. According to the Central Bank of Nigeria (1995), economic growth is an increase in a nation's output of goods and services as measured by the gross domestic product.

The paper is divided into five sections. Section 2 deals debt and foreign aid flows to Nigeria. The third section is for literature review. Section 4 covers the data, methodology and estimation results. Finally, section five deals with conclusion and recommendations.

### Debt and Foreign Aid Inflows to Nigeria

#### Nigeria's External Debt: A Preview

In the late 1970s and 1980s, most African countries experienced severe savings gap and shortage of funds for investment. In the face of low international interest rates, some countries succumbed to the temptation of resorting to external borrowing. Nigeria was one of those countries that went to the international financial market to borrow. In 1970, Nigeria's external debt stock was less than one billion dollars. By the second half of the 1980s, the debt profile had deteriorated due to persistent inability of the country to meet its external debt service obligations. This resulted in mounting arrears and unmanageable growth of the debt stock relative to available resources. The external debt stock, which was about US$11 billion in 1981, grew to nearly

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US$19 billion by 1985. Correspondingly, in 1985 the debt stock as a percentage of total export earnings and GNP rose to uncomfortable levels of 151% and 24 %, respectively. Also in 1985, the debt service payment due was a little above US$4 billion which was about 33% of the total export earnings; however, the actual debt service payment for the year was about US$1.5 billion. By 2001, the debt stock as percentages of total export and the GNP was 149% and 83%, respectively.

The bulk of Nigeria's debt had been incurred at non-concessional terms during the late 1970s and the early 1980s, during a period of significantly low interest rate regime when the London Inter-Bank Offered Rate (LIBOR) fluctuated between 3 and 4 per cent. The debt grew rapidly through the 1980s for two main reasons. The first was accumulation of debt service arrears due to worsening inability to meet maturing obligations. The second was the escalation of market interest rates. LIBOR peaked at 13 per cent in mid –1989. As a result, the pre–1984 debt of most developing countries, Nigeria inclusive, increased astronomically by 1990. The collapse of oil prices and the ever-rising prices of imported (manufactured) goods, poor economic policies, bad management and unfavourable loan terms made it extremely difficult to service the mounting external debt obligations, particularly those due to the Paris Club. Hence, despite three rescheduling arrangements in 1986, 1989 and 1991, arrears continued to mount, which further aggravated the debt problem. Some progress was made however in restructuring the commercial debts and Nigeria has continued to service that category of debts as and when due.

The trend of the external debt highlights the fact that much of the country's external debt is owed to fifteen creditor countries belonging to the Paris Club; as a percentage of the total external debt, Nigeria's indebtedness to this group rose almost consistently from about 30% in 1983 to about 80% in 2001. To address this unwholesome situation Nigeria has since 1986 been having negotiations with the Paris Club and other groups of creditors to reschedule her debts. That notwithstanding, Nigeria's external debt increased steadily until the debt relief in 2005, which drastically reduced the level of the external debt to less than $8 billion. The rescheduled terms allow for a deferral of payments, they do not have provisions for any debt reduction. They are insufficient to address Nigeria's debt problem and have led to an endless cycle of restructuring. Thus, Nigeria's debt overhang remains un-assuaged.

Nigeria, before the Paris Club debt relief in 2005 was one of the most indebted countries in Africa. Comparatively, South Africa's external debt in 2004 was $23 billion while Nigeria's external debt was as high as $37 billion in the same period. When Nigeria was relieved of her Paris Club debts in 2005, the debt burden nose-dived to $7.6 billion. In 2009, Nigeria's external debt slightly rose to $7.8 billion. The total debt to GDP ratio fell drastically from 28.5 per cent in 2005 to as low as 12.39 per cent in 2006. It rose slightly to 13.88 per cent in 2009 and 16.8 per cent in 2009. Figures from the Debt Management Office (DMO) show that Nigeria's domestic debt is skyrocketing daily. In 2008, it was N2,320.31 billion. It increased sharply to about N4.5 trillion as at 31th December, 2010. Again, as at first half, 2011, Nigeria's domestic debt was put at about N5.2 trillion.

This apprehension comes out clearly in External Debt Service Projections, 2002-2011, based on the agreed December 13, 2000 Agreed Minute rescheduling. The figures show that Nigeria's debt service remains unbearably high under the arrangement. They are, therefore, inadequate to provide an escape from the debt trap. The crux of the matter lies in the incongruent nature of the dynamic relationship between the debt burden and available resources. Nigeria's precarious economic position is even more glaring when one takes into consideration, the volatility of oil export revenue. Oil accounts for as much as 98% of aggregate export of goods and about 78% of government revenue. These indices highlight the need to incorporate oil price volatility into any realistic decision on what Nigeria can reasonably afford to provide for debt servicing and why it is necessary, therefore, to grant Nigeria real concessional relief.

The grim reality is that even with the fourth rescheduling, Nigeria's external debt remained unbearable and would continue to hamper economic growth and poverty reduction through the distant future if urgent remedial action is not taken. To buttress this point, a preliminary Debt Sustainability Analysis (DSA) conducted by the IMF indicated that without further rescheduling, Nigeria's debt service to export ratio will remain above the Highly Indebted Poor Country (HIPC) threshold until 2006.

A separate recent study on debt sustainability carried out for Nigeria's Debt Management Office by Crown Agents corroborates the IMF results as it concludes that "Nigeria's debt, based on HIPC targets, is not sustainable after the current Paris Club negotiation." Unless the debt burden is significantly reduced, the goal of reducing poverty by half by the year 2015 may be difficult to achieve. The picture is so bad that the London-based Jubilee Plus, a member organisation of the New Economics Foundation declared that: "Even if Nigeria's debt is entirely written off, it will still need additional aid to meet the internationally agreed poverty targets for 2015." So the minimum that is required is substantial debt reduction. The Debt Management Office has accordingly been making enormous effort to achieve this objective.

## Literature Review

### Some Terminology

The Development Assistance Committee (DAC) of the Organization for Economic Co-operation and Development (OECD) sees foreign aid as financial flows, technical assistance and commodities that are: designed to promote economic development and welfare as their main objective (thus excluding aid for military or other non-development purposes), and are provided as either grants or subsidized loans.

Aid is used to cover all financial transactions made or guaranteed by one government to another. Indeed, foreign aid has become a focus and locus in the Third World. It has assumed the status of foreign policy instrument by developed democracies to strengthen their relationship with, and consequently spread their influence on, the Third World. Aid according to Ajayi (2000:117) is "a form of assistance by a government or financial institutions to other needy countries, which could be in cash or kind". The establishment of an aid system was one of the principles of the Breton Woods system in 1944. The system believes that there should be a free capital market, which allows an unrestricted inflow of foreign aid. Based on this principle, a Marshall Aid Assistance of about $17.5 billion was granted to Western Europe to resuscitate her ruined economy due to the World War II. Since then, the aid system has remained a durable phenomenon of the international economic system (Todaro, 1977:328-335), as cited in Aluko and Arowolo (2010:2).

Foreign aid can be in form of investment in the economy of the needy country; loans; infrastructural development; military assistance such as supply of military hardware at subsidised rates, military agreements, bilateral or multilateral, loose or solid or in a defence pact, supply of military technical assistance such as military, presence to a country in crisis or conflict with another country, supply of military technical assistance and advice, direct participation as in the case of military allies to other countries, military subversions, coups, assassinations, etc.

In addition, grants and subsidized loans are referred to as concessional financing, while loans that carry market or near-market terms (and therefore not considered as foreign aid) are non-concessional financing. From the point of view of the DAC, a loan counts as aid if it has a grant element of 25 percent or more suggesting that the present value of the loan must be at least 25 percent below the present value of a comparable loan at market rates (usually by the DAC, though rather arbitrarily to be a 10 percent with no grace period). DAC classified aid into three broad categories, namely: official development assistance (ODA), official assistance (OA), and private voluntary assistance (PVA). ODA is made up of aid provided by donor governments to developing countries. OA is aid provided by governments to richer countries with per capita income higher than approximately $9,000 and to countries that were formerly part of the Soviet Union or its satellites. PVA covers grants from non-government organizations, religious groups, charities, foundations, and private companies.

Both monetary and fiscal policies are used to regulate the economy by central banks. The instruments of fiscal policy are government borrowing (debt), government spending and taxes. Paramount among the instruments of fiscal policy is debt especially in financing deficit budgets. Borrowing is sometimes a way of spending the economy out of recession. When borrowing becomes a necessity, the government through the central bank can source the funds from internal and/or external sources (Ohale, 2006).

Basically, what matters in borrowing is the ability of government to judiciously engage these funds in productive activities that are capable of generating returns greater than the initial capital (principal). One popular backdrop of government borrowing is the crowding-out effect of debt. Significant government borrowing from domestic residents and banks will increase aggregate demand for loans and raise interest rates and therefore crowd-out private investment spending. In other words, government borrowing tends to reduce the total spending by the private sector which now finds it more costly and perhaps more difficult to borrow. It is for this reason that the monetarists argue that the net effect of fiscal measure aimed at expanding demand in the economy may be insignificant because the financing of the budget deficit will have adverse effects on private spending. Also they argue that government deficits in money supply have repercussions on the price level (inflationary pressure). Growth over a long period implies an increase in the capacity of a country to produce" (Cooper 1996, p. 250). According to Sharp et al (2002), the most commonly used measurement of economic growth is changes in real gross domestic product.

**Theoretical and Empirical Literature**

Economic growth is one key objective of macroeconomic policy globally. The gross domestic product is the major denominator for measuring economic growth. Growth models range from the simple Harrod-Domar and Solow models to the complex endogenous models. However, this article will adopt the "Big push" models to achieve our objectives.

Growth economists over time have postulated different models of growth including the "Big Push" models which have differing implications for foreign aid. According to the "big push" models, Africa is poor because it is stuck in a "poverty trap." To get out of the poverty trap, African countries need a large aid finance increase. In fact, Easterly (2006) described 2005 as the Year of the Big Push.

The core argument behind the Big Push is that co-ordination problems in the context that increasing returns create the possibility of multiple equilibria. That is, a poor country could be caught in a low equilibrium (poverty trap), government intervention can potentially solve the co-ordination problem and push the economy into the better equilibrium which allows for a take-off into sustained growth. Foreign aid can finance the big push. Government's subsidy policies and financing of big infrastructure are typical examples of government attempting to co-ordinate the economy. However, these efforts in most developing economies are marred by rent-seeking and corruption.

Early development economists in the 1950s and 1960s postulated a desirable per capita growth rate and calculated the "investment requirement" to meet this target – the distance between the low domestic saving rate and the "investment requirement" was called the "Financing Gap". The role of aid was to fill the Financing Gap (Rostow 1960, Chenery and Strout 1966). Thus, this model predicted a strong growth effect for foreign aid through its role in boosting domestic investment above what domestic saving would finance. Contemporary policy advocates for an increase in foreign aid to Africa have cited this model explicitly (Devarajan et al. 2002 at the World Bank, Blair Commission on Africa, 2005, Sachs, 2005). Jeffrey Sachs even argued: "success in ending the poverty trap will be much easier than it appears."

The poverty trap implies low income, savings and investment and translates into low economic growth. If saving is too low to keep up with population growth and the depreciation of capital, then per capita growth will be zero or negative (Easterly, 2006). Foreign aid and debt relief are viable sources to finance the "Big Push" to deliver the economy from the poverty trap. In as much as foreign aid is seen as an instrument to drive the economy, it is not without cautions. Over dependence on foreign aid will weaken internal revenue drive and external debt should be maintained at its 60 per cent GDP international norm.

Boone (1996) was among the first to find zero effects of aid on investment and growth. Burnside and Dollar (2000) found that "aid raises growth in a good policy environment." However, Easterly, Roodman, and Levine (2003) found that applying the "new data test" i.e., adding new data unavailable to the original authors but keeping the same specification, the Burnside and Dollar finding no longer holds. Clemens, Radelet, and Bhavani (2004), found positive effects of aid on growth. But, Rajan and Subramanian (2005) failed to confirm the CRB finding and in general found a zero effect of aid on growth. CRB was quoted to support the proposal to increase aid to finance a Big Push in Africa (for example, Blair Commission on Africa 2005, UN Millennium Project 2005). That notwithstanding, another feature of CRB's results contradicts the Big Push models – these models would predict increasing returns to aid, whereas CRB actually find diminishing returns to aid. CRB found an aid-squared term to be significant and negative, so the marginal effect of aid on growth in CRB

turns negative at aid receipts over 8 percent of GDP – many African countries are already above this threshold and virtually all will be above it after the doubling of aid to Africa (Moss and Subramanian 2005). CRB's findings would actually imply the Big Push should not have been recommended by the Blair Commission and the UN Millennium Project.

With respect to aid effectiveness, throughout the analysis, aid does not have a robust link with growth. In fact, Hepp (2005) hardly found any effect of aid on growth. Despite the problems, the stylized facts are consistent with a positive effect of aid on the availability of health services, education, and clean water and sanitation. The effectiveness of foreign aid in recipient countries is limited to a large extent due to corruption, aid fungibility, recipient country policy and donor conditionality.

In a bid to investigate whether numerous debt initiatives during the 1980s and 1990s have had a significant effect on economic growth rates in developing countries in general, Hepp (2005) asserted that, on average, debt relief has no effect on growth rates of developing countries. The second question he addressed was whether the effect on growth rates was different for different subsets of developing countries. He found that countries that are not classified as Heavily Indebted Poor Countries (HIPC) have benefited significantly from debt relief, whereas the growth rates of HIPC countries have been unaffected.

There is a large and growing literature on the effectiveness of foreign aid in promoting economic growth. Burnside and Dollar (2000) (henceforth BD), which found that "aid has a positive impact on growth in developing countries with good fiscal, monetary, and trade policies, but has little effect in the presence of poor policies". Their findings are in line with existing economic theory. Subsequent research shows, however, that the results of the BD study are sensitive to sample selection and may suffer from omitted variable bias. Using the Arellano-Bond GMM estimator, which takes care of country fixed effects by first-differencing and includes lagged endogenous variables as instruments to deal with endogeneity, Hansen and Tarp (2001) found that aid exhibits diminishing returns with respect to growth. Guillaumont and Chauvet (2001) argued that inclusion of shocks to exogenous factors like terms of trade and climate into the analysis of aid effectiveness is essential. The omission of these factors in the BD analysis may have led to overstating the importance of policy. In their 2SLS regression, the authors found that policy doesn't influence aid effectiveness, whereas aid is significantly more effective in countries more vulnerable to shocks.

Rajan and Subramanian (2005a) re-examined the cross-country evidence of the effects of aid on growth. They found little evidence of a link between the amount of aid inflows and subsequent economic growth, whether negative or positive. They tested the robustness of the aid-growth relationship using different lags of aid, different time frames, multi and bilateral aid, types of aid, short and long-term impact of aid, different samples, and cross-section and panel specifications. The evidence of aid effectiveness was described as weak, whether the aid variable is interacted with a policy variable or not. Rajan and Subramanian (2005b) offer an explanation on how aid can hurt growth instead of improving it. Increased aid inflows can lead to overvalued exchange rates, which then lead to a loss of competitiveness in the traded sector of a developing nation. Consequently, this loss of competitiveness retards growth in the economy, since the (more innovative) traded-goods sector is the main driving force of growth in the economy. Their empirical evidence supports this hypothesis.

One promising way to ameliorate the distortions created by aid dependency – at least in the case of severely indebted countries – is to think about debt and the consequences of debt relief. This brings us to a much related strand of literature that focuses on the link between debt and growth. A prominent example in this area is the debt overhang theory. Krugman (1988) argued that the high stock of debt acts like a high marginal tax on investment. They suggested that the incentives for domestic firms or the debtor government to invest at home are distorted since any positive returns from investment projects are used for debt payments. Anticipating this, however, economically sensible investment projects will be forgone, thus harming the long-term economic growth of the debtor country.

Abbas and Christensen (2007) studied the relationship between domestic public debt and economic growth and found a positive and non-linear relationship between these variables.

In an empirical study, Pattillo et al. (2002) found evidence of debt overhang. Using a panel data set comprised of 93 developing countries for the period 1969-1998, they suggested that at a debt stock of 35-40 percent of GDP, the average effect of debt on per capita growth became negative. Clements et al. (2003) confirmed the results of Pattillo et al. of a debt overhang. Furthermore, they found that debt service has a "crowding out" effect on public investment, thereby lowering the overall growth rate of a developing country. They argued that if resources freed up by debt service relief can be directed towards public investment, growth rates in some HIPC countries would increase by half a percentage point annually.

## Data, Methodology and Estimation

### Data

Secondary data were sourced from both local and international sources such as the Central Bank of Nigeria Statistical Bulletin, CBN Annual Reports and Statement of Accounts, the World Bank, International Monetary Fund (IMF) and the Debt Management Office websites. Foreign aid was proxied by net official development assistance and obtained from IMF's International Finance Statistics. Real economic growth data were obtained directly from CBN publications. The period for the study is 30 years, i.e. 1981 – 2010.

Foreign aid was proxied by official development assistance as used in related papers cited (Alabi, 2012; Peter et al, 2012).

The ordinary least squares econometric technique was used because it is very reliable and widely used by researchers to measure the impact of variables. Generally, the properties of the time series variables were tested. A unit root test was also carried out on each of the variables to test the stationarity of each variable. Specifically, the Augmented Dickey Fuller technique was used for the unit root test. The ADF was chosen rather than the DF approach because it incorporates serial correlation, that is, the error term is unlikely to be white noise. Hence, the ADF adds the lagged values of the dependent variables in order to eliminate autocorrelation. This was to ensure non-spurious econometric results. Co-integration test was carried out to test for the long-run relationship among the variables. It is also important we use the Engle-Granger test for co-integration since it uses a parametric augmented Dickey-Fuller (ADF) approach. Co-integration and error correction methodology is also carried out to add flexibility and

versatility to econometric estimation by incorporating short dynamics with long term equilibrium.

**Model Specification**

A linear regression model is specified to examine the relationship among the various variables. The dependent variable is economic growth and the explanatory variables are domestic debt, external debt and foreign aid.

The OLS linear regression equation based on the above functional relation is:

$$GRWT = \alpha + \delta DOD + \beta EXD + \gamma AID + \varepsilon \quad (1)$$

where;

GRWT = Real GDP growth

DOD = Domestic debt

EXD = External debt

AID = Foreign aid (net official development assistance)

$\varepsilon$ = error term

Taking logarithms of the right-hand side of equation (1) yields:

$$GRWT = \alpha + \delta \log DOD + \beta \log EXD + \gamma \log AID + \varepsilon \quad (2)$$

The a priori expectations: $\delta<0$, $\beta<0$ and $\gamma<0$.

**Data Analysis and Discussion of Results**

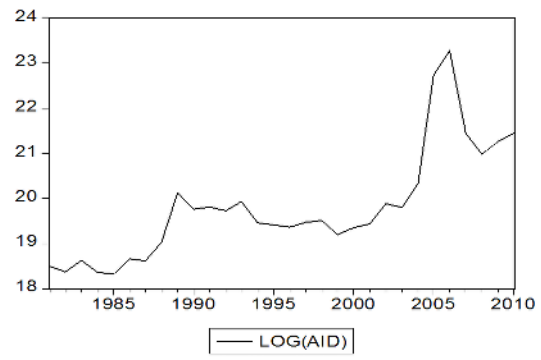
It was observed that RGDP for the period 1981 to 2010 showed a steady increase except from 1982 to 1984 and 1987 that recorded some fluctuations as seen in figure 1. Data gathered from the International Monetary Fund (IMF) on net official development assistance also shows that foreign aid to Nigeria increased steadily over the years as depicted in figure 2. However, there were downward

Figure 1: GRWT Trend, 1981 to 2010



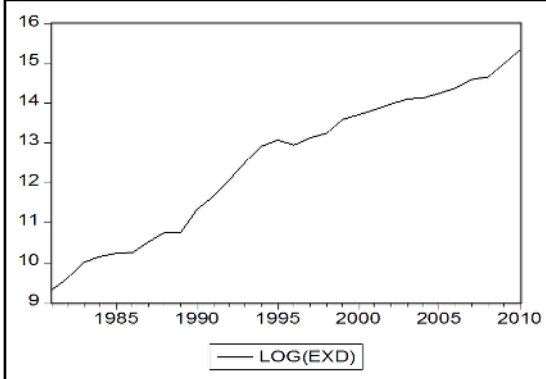

Source: Authors

Figure 2: Net Official Development Assistance (Foreign Aid), 1981-2010



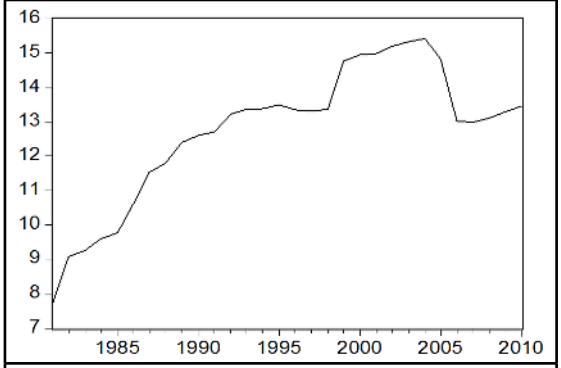

Source: Authors

Figure 3: External Debt Trend, 1981 to 2010




Source: Authors

Figure 4: Domestic Debt Trend, 1981 to 2010




Source: Authors

fluctuations in 1983, 1991, 1998, 2001, 2004, 2005 and 2006. Figure 3 shows the trend of external debt from 1981 to 2008. Nigeria's external debt was highest at the eve of the debt relief by the London and Paris Clubs, i.e. in 2004 and nose-dived after the relief. Domestic debt increased sharply in 2006 following Nigeria's external debt relief. This is displayed in figure 4. This might be as a result of the government avoiding the trap of falling into the external debt trap again.

Generally, in a special case where we have a first order autoregressive model (i.e. AR(1)), the behaviour of time series is largely determined by its value in the preceding period. Thus, what happens in *t* is largely dependent on what happened in *t-1*, or alternatively what will happen in *t+1* will be determined by the behaviour of the series in the current model *t*. The condition that the coefficient of the variable lagged a period is less than unity guarantees stationarity. If the coefficient is greater than unity, the time series data is said to be explosive and if the coefficient equals unity, the series contains a unit root and it is non-stationary. The time series properties tests show that DOD, FAID and EXD were explosive and only GRWT was stationary at 10 percent level of significance.

Table 1: Unit root test result using ADF procedure

| Variable | ADF Test Statistic | Critical Value (5%) | Order of integration | Lag Length |
|---|---|---|---|---|
| LOG(DOD) | -2.803033 | -1.9540 | I(1) | 1 |
| LOG(FAID) | -5.149421 | -3.5867 | I(1) | 1 |
| GRWT | -7.390316 | -3.5867 | I(1) | 1 |
| LOG(EXD) | -2.863922 | -2.6265 | I(1) | 1 |

Source: Authors

Table 1 shows the result of the stationarity tests of all variables in this study using Augmented Dicky-Fuller test. The lag length was selected in order to ensure that the residuals were white noise. The results show that all variables are stationary at first difference, i.e. I(1) at the 5 percent chosen level of significance.

The essence of testing for the stationarity properties of the variables is founded in the assumption of Auto-regressive Distributed Lag (ARDL) bounds testing approach to co-integration that the time series must be I(0) or I(1) variables (Olusegun, 2009). Thus, indicating that the assumption of bounds testing will collapse in the presence of I(2) variable. The result therefore, implies that the assumption of bounds testing approach is applicable in this study since the variables are stationary at first difference, that is I(1).

Table 2 shows the results of the Johansen co-integration test which establishes the existence or otherwise of the long-run relationships among the variables. The results show that there is one co-integrating equation among the variables at the chosen 5 percent level of significance.

Table 2: Johansen's Co-integration Test Results

| Hypothesized No. of CE(s) | Eigenvalue | Trace Statistic | 5 Percent Critical Value | 1 Percent Critical Value |
|---|---|---|---|---|
| None * | 0.669603 | 51.84498 | 47.21 | 54.46 |
| At most 1 | 0.414741 | 20.83612 | 29.68 | 35.65 |
| At most 2 | 0.183956 | 5.836484 | 15.41 | 20.04 |
| At most 3 | 0.005145 | 0.144443 | 3.76 | 6.65 |
| *(**) denotes rejection of the hypothesis at the 5%(1%) level | | | | |
| Trace test indicates 1 cointegrating equation(s) at the 5% level | | | | |
| Trace test indicates no cointegration at the 1% level | | | | |
| Source: Authors | | | | |

Table 3: Parsimonious Error Correction Results

| Dependent Variable | GRWT |
|---|---|
| Constant | -2427.958 |
| | (0.0191) |
| ΔLOG(DOD) | 2.488902 |
| | (0.0133) |
| ΔLOG(EXD) | -7.912966 |
| | (0.0057) |
| ΔLOG(FAID) | 0.789649 |
| | (0.4254) |
| ECM(-1) | -0.296136 |
| | (0.0235) |
| $R^2$ | 0.499551 |
| Adj. $R^2$ | 0.324394 |
| DW | 1.791668 |
| F-Stat | 2.852020 |
| | (0.030993) |
| Source: Authors | |

From table 3, the parsimonious error correction results show a positive relationship between the dependent variable, LOGDOD and LOGFAID. On the other hand, the results report a negative relationship between economic growth rate and LOGEXD. An increase in domestic debt and foreign aid inflows bring about 2.5 and 0.79 percent economy growth respectively. Whereas, a naira increase in external debt has a negative effect of about 7.9 percent on economic growth. The overall model is statistically significant sine F statistics has a probability of 0.03. The coefficient of determination ($R^2$) and the adjusted ( $\bar{R}^2$ ) are 0.50 and 0.32 percent respectively. By this result, the model shows a poor fit. The percentage explained by exogenous variables was about 68 percent. The value of the Durbin-Watson (1.79) statistics shows the absence of serial correlation.

**Conclusion**

Both foreign aid and debt are important determinants of economic growth. Although the relationship between each of these variables and economic growth is complicated, our findings have shown that increased foreign aid and domestic debt (however, within the official limits) lead to higher real gross domestic product and increased external debt leading to a fall in economic growth.

Sometimes over-dependence on official development assistance dampens revenue mobilization and generation efforts by recipient governments which eventually results in reduced government savings, economic vulnerability, neo-colonialism as well as undermining private sector incentives for investment. It is imperative for governments of foreign aid recipient countries to fight corruption especially official corruption. The conditions for foreign aid should have broader participation by recipients. In addition, donors should harmonize and coordinate their various processes of initiating, implementing and monitoring projects as recipient countries find it very difficult to coordinate such numerous flows. Finally, the monitoring and evaluation of aid should be intensified and be result-based. In this view, aid programmes should aim to achieve very specific quantitative targets.

Similarly, both external and internal debts are sources of revenue to the government in times of fiscal deficits. This paper believes that considerable dependence on foreign aids and debt to finance budget deficits should be discouraged. Government should improve her revenue mobilization base. Debt should be within its international threshold.

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