External Debt Burden and its Impact on Growth:
An Assessment of Major Macro- Economic Variables in Nigeria

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Abstract

The study examines External debt burden and its impact on major macro economic variables in Nigeria. The Econometric method of co integration technique was applied to establish the quantitative impact and relative significance of the explanatory variables. The study shows that there exists a long run relationship among the major macro economic variables. The results show that External debt burden, foreign direct investment, inflation and Export have a positive relationship with economic growth. The study recommends that the Nigerian government should not contract further unproductive debt as it may be detrimental to the growth and development of the economy.

1. Introduction

The act of borrowing creates debt. Debt therefore refers to the resources of money in use in an organization, which is not contributed by its owners and does not in any other way belong to them. (Oyejide et al 1985). It is a liability represented by financial instrument or other formal equivalent.

Public debts, internal and external are debt incurred by the government through borrowing in the domestic and international markets in order to finance domestic investment. Therefore, national debt is seen as all claims against the government held by the private sector of the economy, or by foreigners whether internal borrowing or not (and including banks held debt and government currency if any), less claim held by the government against the private sector foreigners (Modighni, 1961).

External debt is the amount at anytime, or disbursed funds and outstanding contractual liabilities of residents of a country to repay principal to non residents (IMF external debt statistics guide for compilers and users 2003). Although, the literature originally developed from observations made from the debt crisis of some middle income countries (MICs), in Latin American in the 1980s, the theoretical framework developed is still applicable to the low income countries particularly of those located in sub-Saharan Africa in some peculiar way. This is because these countries have mostly witnessed the debt overhang problem and gross economics mal- functioning of economic policies as well as under-development.

Nigeria, a country whose debt was minimal and insufficient in 1970, a country that advanced loans to international monetary fund during the oil boom of mid 80s is later in the year 2000 to 2005 listed among the leading nations of the world with serious external debt problem. The debt burden which the country carries has not only served to worsen the general depression in the Nigerian economy, but also has exerted various social, political and economic costs. Apart from its social costs, the Nigerian domestic debt crisis has led to escalating inflationary pressures in the face of falling real incomes, budgetary deficits and the deterioration of social services and infrastructure (Nnoli, 2003). The history of Nigerian mounting debts can hardly be separated from its decades of misrule and the continued reckleness of its rulers. Nigeria debt stock in 1971 was 1 billion, By 1991, it had risen to $33.4 billion and rather than decreased, it has been on

the increase particularly with the in surmounting regime of debt servicing and the insatiable desire of political leaders to obtain frivolous loans for the execution of dubious projects (Ayandiji Daniel, 2010).

Nigeria's external debts date back to 1958 when a loan of U.S 28.0 million was contracted from the World Bank for railway construction. It was small because not much borrowing took place in that decade and public debt charges were relatively small, averaging N3.2 million per annum and representing 0.2 percent of GDP. Nigeria's public debt was US $69.7 million in 1960, rose to US 246.0 Million in 1970, representing 252 percent increase, and then to 3,146.0 million in 1977. From 1960 to 1970 external debt averaged US $160.4 million per annum. Although the total debt stock declined in 1975 and 1976 by 10.3 and 20.7 percent, the average growth of debt between 1970 and 1977 was 5.9 percent. (Obadan, 2005).

Nigeria's disbursed external debt outstanding which was less than a billion US. Dollars in 1976, shot up to over $5 billion in 1978 as a result of the loans contracted from the Eurodollar financial market. External debt, which stood at US $3,146.0 million in 1977 rose sharply by 61.8 percent to US $5,091.0 million in 1978. Particularly, the first half of the 1980s, the spate of borrowing increased with the entry of state governments into large external loans contractual obligations, coupled with a rapid accumulation of trade bills. The external debt stock rose from US $8,934.0 million in 1980 to US $12,954.0 million in 1982, and US $19,550 million in 1985. (Anyanwu et al 1997).

Nigeria debt was just mere US $298,614.4 billion in 1990, infact in 1979 Nigeria's total stock was US $1611.5 billion with over $5 billion in foreign reserve. The debt stock rose to US $716,815.6 billion in 1995 but came down to US $489269.6 billion in 2004, and in 2005 it stands at about US$26,950,072 billion due largely to interest, surcharges and penalties rather than increased borrowing. (Anyanwu et al 1997).

For instance, between 1992 and 2000 principal arrears on our national debt was US$10.31 billion, interest arrears was US $4.45 billion and late interest was US $5.18 billion by the end of 2003, new arrears of US $3.78 billion was included in addition to principal arrears of US $1.22 billion, interest arrears of US $2.4 billion, and late interest of US $.2 billion. It is obvious that even if we managed to pay the interest and charges alone, there was no way in which we could ever hope to pay the principal, this is why it is the "Debt Trap", of the total debt stock the federal government owes 75 percent, and states owe 25 percent. Also, of this total we owe 83.16 percent to the Paris club, while the balance is made up of multilateral and commercial Debts (Obadan 2004).

The general aim of this paper is to access the impact of external debt burden on the Nigerian economy specifically the study hope to find out the impact of external debt burden on, foreign direct investment, inflation, and export on economic growth of the Nigerian economy.

The neoclassical debt paradigm postulated that there exist a positive relationship between debt and economic growth, this is based on the assumption of perfect movement of capital in terms of international exchange and deployment of resources from one country to another, hence the general assumption of that external debt burden causes a trickle down effect on economic growth that is it discourages economic growth of any Nation.

The flow effect of debt on economic performance usually crowding out investments and consequently a larger debt service discourages public investment. It soaks up government budget resources and reduces money available for productive investment (Easterly and Schmidt Hebbel, 1991).

In the work of Akperan Adams (2001) he posits that the growth of Sub- Saharan African (SSA) countries is strongly retarded by the huge external debt of the region which is equally responsible for the mass poverty in Sub- Saharan African countries.

Sachs (1990) and Kenen (1990) "see external external debt burden as the main reason for slowing economic growth of the heavily indebted countries because of large debt overhang, private investments are discouraged and the payments of the debt services of some countries are so large that the prospects for a return to growth paths are dim, even if the government were to apply hand adjustment programmes". It is argued that a debt overhang creates adverse incentive effects on the economic growth in the long run.

External debt burden has a heavy weighing down on the growth of African countries, exacerbating the problems arising from sharp declaration in primary commodity prices; this statement is credited to Green and Khan (1990). The debt burden has clearly been a constraining factor on rapid economic recovery. This constraining influence of external debt burden became more pronounced as the African economies failed to grow sustainable level.

Iyoha (1990) rightly observed that heavy debt burden payments have inevitably put great pressure on budgets leading to rising fiscal deficits in the heavily indebted countries, the implication of this impact are: it has to increase tax to service the debt and reduce the deficit, it equally has the effect of depressing investment on the debt overhang effect. According to the World Bank (1989), they opine that external debt act as an important constraint on the development

prospect and poverty reduction in Sub Saharan African countries, thus slowing their growth and making the fight against poverty a less effective one.

A country suffering from debt overhang will invest less than it would in the absence of such an overhang and consequently may forego projects with positive net present value, this view is in the work of Sachs (1984), and he stated this because high debt stock acts as an implicit tax on investment.

Geiger (1990), states that some of the ways excessive debt appears to affect economic growth and development is:

- The inability of developing country to service the debt promptly affects credit and if the problem persists the nation will eventually have difficulty borrowing for new project. The scissors effect of declining capital in the flows along with increasing debt service payment obviously creates problems for the developing nations.
- Large debt service requirements divert foreign exchange capital from internal investment to principal interest payments.
- As a result of the increased pressure to obtain more foreign exchange to service the debt, many indebted nations restricted imports and reduce trade.
- The accumulation of debts reduces the country's efficiencies in as much as it makes it more difficult for the country to adjust officiously to major stocks and international financial fluctuations.

2. Theoretical Review of External Debt

The act of borrowing creates debt. Debt therefore refers to the resources of money in use in an organization, which is not contributed by its owners and does not in any other way belong to them (Oyejide et al 1985). It is a liability represented by financial instrument or other formal equivalent.

Public debts, internal and external are debt incurred by the government through borrowing in domestic and international markets in order to finance domestic investment. Therefore national debt is seen as all claims against the government held by the private sector of the economy, or by foreigners whether internal borrowing or not (and including Bank held debt and government currency if any), less any claim held by the government against the private sector foreigners (Modighni, 1961).

External debt is the amount at anytime, or disbursed funds and outstanding contractual liabilities of residents of a country to repay principal to non residents (IMF external debt statistics guide for compilers and users, 2003). Although, the literature originally developed from observations made from the debt crisis of some middle-income countries (MICs), in Latin America in the 1980's the theoretical framework developed is still applicable to the low-income countries (LICs) particularly, of those located in sub-Saharan Africa in some peculiar way. This is because these countries have mostly witnessed the debt overhang' problem and gross economic malfunctioning of economic policies as well as under-development.

In the neoclassical debt paradigm, there exist a positive relationship between debt and growth; this is based on the assumption of perfect movement of capital in terms of international exchange and deployment of resources from one country to another. Hence, the general presumption is that debt burden exerts a "weighing own" effect on the rate of economic growth and development; through several channels related to the debt stock and consequent debt servicing.

According to Easterly and Schmidt Hebbel (1991), the flow effect of debt on economic performance usually crowding out public investments and consequently a larger debt service discourages public investments. It soaks up government budget resources and reduces money available for productive investments. Although, the traditional neoclassical models may have explained the cause effect" relationship between debt and economic growth, it has been criticized for its flawed and unrealistic assumptions of perfect mobility of capital which in the real world has been known not to be perfect due to trade sanctions embargoes, restrictions and political instability.

Andrea F. Presbitero of the Department of Economic, Universita Politecnica Delle Marche in Italy, who holds the above view, investigated the relationship exhibiting between external debt and economic growth in poor countries.

Presbitero (2004) after carefully considering the theoretical argument supporting the neoclassical models in his work "the debt-growth nexus: an empirical analysis" opines that the adverse effects of external debt are due To Whom It May Concern: the crowding out of public investment, because of the effect of debt services payment expression of a single dynamic that relies on net transfer from southern poor countries to feed the expansion of northern or western countries, thereby perpetuating the development of some countries at the expense of poverty.

Caliari (2003), submits that no proposal of solution developed in the area of international trade can be effective in supporting the development of southern countries without adequately contemplating the external debt problem suffered by them. Perhaps, the more interesting aspect of Caliari's theoretical work is his sufficient explanation of some of the ways in which imbalances nurture each other. Such areas include commodity prices and devaluated currencies of the Low Income Countries (LICs), low value added products exported from the Low Income Countries, low level of technological and intermediate goods, investment and unfavourable trade related conditionalities attached to debt relief and loans.

Exploring earlier on Caliari's (2003) and presbitero (2004) line of argument, Akperan Adams (2001) further submits that the growth of sub-Saharan African (SSA) countries is strongly circumcised by the debt overhang existing in the region. According to Akperan Adam (2001), the debt squeeze is responsible for the mass poverty in Sub-Saharan African countries. Given, the decline in capital flows and exports, low and slow out- put and large scale poverty being experienced, Akperan (2001) recommends that the prospecting of solving the debt, growth and poverty crisis will depend on output growth, increasing domestic savings, export growth and higher direct foreign investment. Other solutions recommended are the lowering of interest rates, deeper debt relief, coordinated effort by debtors and creditors and corporation of the international community to consider debt forgiveness or cancellation by the creditors countries of the north in a direct response to the agitation carried out by curl society groups and national government of the heavily indebted poor countries {HIPCS} and low income countries (LICs).

Sachs (1990) and Kenen (1990) sees external debt burden as the main reason for slowing economic growth of the heavily indebted countries. Because of large debt overhang, private investments are discouraged and the payments of the debt services of some countries are so large that the prospects for a return to growth paths are dim, even if the governments were to apply hand adjustment programmes. It is argued that a debt overhang creates adverse incentive effects on the economic growth in the long run.

External debt has had a severe impact on African countries, exacerbating the problems arising from sharp declaration in primary commodity prices, (Green and Khan 1990). The debt burden has clearly been a constraining factor on rapid economic recovery. This constraining influence of external debt burden became more pronounced as the African economics failed to grow sufficiently to reduce the burden to a sustainable level.

Debt is heavily tied to the public domain; the responsibility for debt service also falls heavily on the public sector. The heavy debt services payments have inevitably put great pressure on budgets, leading to rising fiscal deficits in the heavily indebted countries (Iyoha 1999). The implications of these are many, one of which is that increased tax to service the debt and reduce the deficit, has the effect of depressing investment on the debt overhang effect. Secondly forced education in public investment, especially on social services, Education and Health also results from the stiff demand of high debt service payments on the budget. This diversion of resources from public investment to debt service payments is related to the "overcrowding out" hypothesis.

The overhang effect of heavy debt burden has been most deliberating in many debtor African countries; this has highly affected many high yielding investments in human capital accumulations, investments in technology and physical infrastructure, e.t.c. in such debtor's countries therefore remain unexploited (Bowe and Dean 1997).

Iyoha (1999) in his econometric analysis of the effect of external debt on economic growth in SSA countries found empirical support for the negative effect of debt overhang. The analysis showed that Sub- Saharan Africa's external debt stock and debt service payments act to depress investment and lower the rate of economic growth. Indeed, gross domestic investment collapsed in Africa in the 1980's and 1990's. Not only has external debt overhang depressed incomes, investment and living standards, it has also seriously constrained the scope of macro economic policy making and has damaging effects on economic and financial institution. (Green and Kahn 1990).

External debt has become a major drain on transfer of external resources from African countries (Nigerian) and majority experience large negative transfers, and it has been argued that large debt service payments made by indebted Less Developed Countries retard their growth (World Bank, 1989). The resulting debt overhang discourages investment and affects future output negatively because of the revenue generated by production and exports is used To Whom It May Concern: repay current debt obligation. The high cost of debt servicing is one of the reasons of under investment in Latin American and the Caribbean, resulting in a paltry 1.3 percent growth per annum in real per capita terms for the region over the last decade (Leipziger, 2001). A country suffering from external debt burden would invest less than it would in the absence of such an overhang and consequently may forego projects with a positive net present value (Bosworth and Collins, 2003). Investment occurs because the stocks of debt act as an implicit tax on new investment; a country's government raises the resources it needs to service its debt by taxing firms and households. An increase in the

government debt increases the private sectors expected future tax burden. Because higher taxes divert the benefits of new investment from the private sector to the existing debts holders, they also reduce the private sector's incentive to invest. In summary, a country suffering from debt overhang is unable to service its debt to obtain new loan and to invest as much as it should. Metwally and Tamaschke (1994), conclusions were that, due to the reduction in economic growth via investment, namely debt overhang, they argued that debt overhang is a significant factor influencing slowdown in investment. Debt overhang theory is based on the premise that if debt will exceed the country's repayment ability with some probability in the future, expected debt service is likely to be an increasing function of the country's output level. Thus some of the returns from investing in the domestic economy are effectively taxed away by existing foreign creditors and investment by domestic and new foreign investors is discouraged.

Geiger (1990) states that some of the way that excessive debt appears to effect economic development is:

- Large debt services requirements divert foreign exchange and capital from internal investment to principal and interest payments.
- The inability of developing country to service the debt promptly affects its credit and if the problem persist the nation will eventually have difficulty borrowing for new projects… the scissors effect of declining capital in the flows along with increasing debt service payment. Obviously creates problems for the developing nations.
- The accumulation of debts reduces the country efficiencies, in as much as it makes it more difficult for the country to adjust officiously to major stocks and international financial fluctuations.
- As a result of the increased pressure to obtain more foreign exchange to service the debt, many indebted nations restricted import and reduce trade.

Hoeffler, Ankle (2002) say that the scope of debt overhang is much under in that the effects of debt which do not only affect investments in physical capital but any activity that involves in carrying cost up, such activity includes investments in human capital and in technology acquisition whose effects on growth may be even stronger overtime. High debt overhang discourages private investments depending on how the government is expected to raise the resources needed to finance external debt services and whether private and public investments are complementaly, for example government resorts to inflation tax or to a capital levy, private investment is likely to be discouraged.

The HIPC initiative launched jointly by the World Bank and the international monetary fund in 1996 has highlighted the great relevance that high external debt has for economic performance. The presence of high debts has different effects on countries, not only related to their macro economic performance, but also to the political and institutional aspects. High debts could undermine the effectiveness of structural reforms aimed to enhance growth and poverty reduction (Were, 2001).

The flow of debt on economic performances are due to the so-called crowding out of public investment, which states that a larger debt service discourages public investment, since it soaks up resources from the government budget and reduces the amount of money available for productive investment. High external debt also shrinks total spending in poverty alleviation programs and in health and education services. (Easterly and Schmidt   - 147 - Habbel,(1991).

Poor outcome with Regards, to both growth and investment has been widespread among highly indebted countries since 1982, aggravating the burden of foreign obligations relative to domestic resources and worsening the debt situation. In fact, this disappointing economic performance undoubtedly reflects the policy unbalances that gave rise to the debt problem in the first place (World Economic Outlook, April 1986).There is also a widespread view that the debt burden has itself exacerbated the economic situation in highly indebted countries. This view is based on the observation that the significant reduction in the current account deficit of these countries since 1982 was achieved through a large drop in domestic investment, which presumably had adverse effects on their growth performance. Proponents of this view, which is sometimes labeled the "debt overhang" hypothesis, argue that when foreign debt becomes excessive, actual payment to creditors become linked to the economic performance of the debtor country. Therefore, potential increases in debt payments depress the returns to productive investment and discourage capital formation.

Debt overhang occurs when countries are unable to service their debt in full and so actual payments are determined by some negotiating process between the debtor country and its creditors.(Borenstein,1989).

3. Empirical Review on External Debt

Using macro economic data for a panel of 100 developing countries over the period of 1980-2002 (which include per capital GDP measured at purchasing power parity, population growth, fiscal balance, investment, Aid, primary education,

exports and import, terms of trade, inflation, domestic credit, urbanization and debt stock) and institutional variables covering 1984-1997, Presbitero (2004) found from his growth model regression that:

> *…The crowding out effect is due to debt service Payment, while the stock debt works in a more complex way, since it has generally a non- linear relation with investment and a strong negative effect on growth.*

In his concluding remark, Presbitero (2005) observed that debt stock reduction should enhance economic growth since a reduction of NPV of debt to exports ratio is found to increase per capital GDP growth rate by 0.9-1.8% while a greater relevance to debt service reduction should be required whether the target is in a higher investment ratio, because the crowding out effect is estimated to range between 0.15 to 0.27. The empirical literature on the determinants of investment in developing countries is increasing. More recent writing increasingly focused on the effect of external debt on private investment. Two contrasting deductions have emerged so far. Firstly that the external debt crises has contributed significantly to decline in investment, this is because debt creates disincentives to investment; and secondly, the decline of investment in heavily indebted developing countries is not due to the debt problems, and so, the debt overhang hypothesis is irrelevant.

Akpan and Festus (1998), who holds the above view examines the determinants of private investment in Nigeria with particular reference to the effects of debt service burden.

Akpan and Festus (1998), after carefully considering the theoretical and empirical argument concludes that external debt burden has contributed significantly to a decline in investment in Nigeria. The empirical enquiry of Green and Villanueva (1991) covered twenty-three developing countries for the period of 1975 and 1987. It is evident from their quantitative estimates that the ratio of GDP and debt service ratio significantly affect private investment in the sampled countries. The works of Borenstein (1993), Serven and Solimano (1993), and Partor and Hilt (1993) which cover a number of developing countries for much of the 1980s, support the hypothesis that the debt crises was a major determinant of investment decline after 1982.

Several factors have been used to justify this result; reference is made to the two considerations repeatedly cited. According to this line of thought, the incentive to invest peters out since a large proportion of the returns of investment is used to meet debt services obligations; this has been labeled the debt overhang phenomenon (Sachs, 1998).

Second is the inability to honor and meet debt services obligations as at when due, an outcome which had led to a deterioration of relations between debtors and creditors countries, since new lending is substantially reduced to indebted countries, as has been the situation in heavily indebted African countries since the mid-1980s. While these factors work through the supply side, the other channel operates via reduced demand for credit by the private sector, causing a regressive effect on investment.

Mukhopadhyay (1995), constructed a disequilibrium frame work to evaluate the relationship between this macro economic variables, his comprehensive study draws data from nine developing countries; Argentina, Brazil, Chile, Columbia, Ecuador, Mexico, Philippines, Thailand and Uruguay from 1971-1992. The result estimate reveals that rapid growth of external debt and service\ GDP ratio compressed private investment through their effects on both the demands for and supply of credit.

The evidence from Tanzania Moshi and Kihindo, (1994) is also instructive, these authors considered the effect of government policies on private investment over the period of 1970-1993. Result of the ordinary least squares estimation technique showed a substantially significant negative impact of external debt on investment in the country.

Furthermore, the findings of some other investigators on this subject, however, do not support the proposition that the debt crisis is inimical to private investment. (Warner, 1992; Cohen, 1993).

In Warner's view, the external forces which triggered the debt crisis that have also accounted for the fall in the level of investment in heavily indebted countries (Warner 1992) based on well reasoned argument real interest rates was estimated for some 13 heavily indebted countries (Manly Latin American countries). Relying on the strength of sample forecast between 1982 and 1989, simulated exercise did not validate the finding that rising debt stock and debt service deter private investment.

Studying 81 countries Cohen (1990) regressed the investment ratio on a number of variables, including debt to export ratio. The coefficient of the debt service ratio was not statistically significant, thereby repudiating the conclusion that it is not the growing external indebtness of the 1980 which explained diminished profile of investment in the countries investigated.

The empirical evidence on the effect of debt variables on investment and/or growth in Low Developed Countries varies; however, most authors find debt variables to be significantly and negatively correlated with investment or growth (Green and Vilanueva, 1991; Cohen, 1993, 1995; Oshikoya, 1994; Hadjimicheal et al 1995; Iyoha, 1997; Elbadawi et al 1997; and Ajayi and Iyoha, 1998).

Savvides (1993), finds that, while debt services crowd out investment, the debt-to-GNP ratio had negative but significant coefficient, indicating that the hypothesis of debt overhang effect could not be rejected.

Kumar and Mlambo (1996) reach the same conclusion in a study of investment in Sub-Saharan African countries. Desphande (1997) also comes out with a similar result from his study of the experience of 13 severely indebted countries for the period of 1971 to 1991.

In analysis of the relationship between growth and investment and debt burdens in heavily indebted poor countries (HIPCs) IMF (1996) also concluded that it is difficult to detangle the role of debt overhang from other factors (Claessens et al 1996).

In a recent IMF (1999) study of the 41 heavily – indebted countries (32 of which are in Africa), it concluded that the relationship between debt and investment on economic growth seems to be weak in middle- income developing countries as compared to the low- income developing countries. Other factors may have also worked to depress investment or economic growth in these countries.

Results obtained from empirical (Iyoha 2000) confirms that an excessively high stock of external debt depress investment and lowers the rate of economic growth in developing countries, such as heavily indebted country like Nigeria.

Weeks (2000), concludes that for Latin American countries, high debt burden has a negative impact on their growth performance, this result is reconfirmed by Cohen, 1997.

Lensink and Morrisseys (2000), hypothesize that it is not so much the amount of debt that may hamper economic growth, but the uncertainty with respect To Whom It May Concern: the annual debt services payments that may really matter. They defined uncertainty of debt services payments as the unanticipated or unexpected instability of these payments. They further argue that there is a close link between uncertainty and instability; the annual instability of payments may contribute to uncertainty of debt payment. This uncertainty of payments may hamper much needed changes in government policies, which in turn reduces the incentives to private investors.

The relationship between growth and indebtedness has received a lot of attention in the literature. According to (Sachs 1980), the debt overhang theory states that beyond a point, high external debt acts as a tax on investment since a fraction of what is gained in increased output goes to the creditor in the form of debt service payments.

Empirical evidence largely suggests that the decline in investment occurred at the same time with the onset of the debt crisis (Sachs 1989). Consequently, high indebtedness leads to low investment, low growth and consequently, low payment on indebtedness by the late 1980s and early 1990s in Nigeria; The thinking that a high debt burden (as measured by the various indices) represented a constraint to the economic growth of developing countries became widely accepted. The empirical findings, based mainly on middle-income countries and a relative few studies on Africa, finds significantly negative relationship between investment (and / or growth) and debt variables.

Most of the studies on determinants of investment in the heavily indebted countries in the last two decade found an increase in the debt burden to be associated with a decline in both total and private investment. Examples of such studies are Fry (1989) , Greene and Villanueva (1999).

A recent international Monetary Fund (IMF) study of the 41 indebted countries (25 of which are Africa) concludes as follows:

- the relationship between debt and investment or economic growth seems to be weak in the middle- income developing countries. Given other factors that have worked to depress economic growth and investment in these countries, it is difficult to isolate the role of debt overhang.
- Heavy external burden nevertheless may have been associated with disincentives to invest, which could have contributed to the relatively poor growth performance of some of these countries.

The work of (Savvides 1992), using simultaneous limited dependent variable approach, found that while debt services crowded out investment, the coefficient of debt to gross domestic national product, though negative, was insignificant.

(Warner 1994), concludes that "evidence therefore does not support the simple notion that accumulated debt represents an investment deterrent".

Also Daniel Cohen (1999) investigated the extent of debt overhang problem and associated debt crisis from the 1980s to the growth slow down of the 1990s. He found that the debt variables did play a significant role in the reduction in

economic growth. Furthermore, Cohen concluded that more than half of this growth slowdown in the debtor countries could be attributed directly to the debt crisis.

Deshpande (1997) tested the debt overhang hypothesis by means of an empirical examination of the investment experience of thirteen severely indebted countries; he established that in countries with debt overhang; external debt captured many of the effects of other explanatory variables that traditionally explained investment levels. In particular, Deshpande demonstrated that the relationship between external debt and investment during the 1980s was consistently negative for the sample countries.

Afxention and Serletis (1996) examined whether indebtedness has been detrimental to per capital growth in moderately and severely indebted countries, they found that there exists ample evidence of the depressing effect that debt overhang exerts on investment and its long term adverse impact on economic growth.

Cohen (1993) looked at 81 developing countries over the period 1965-87, rejecting the debt overhang hypothesis and supporting the crowding out effect. Cohen, finds not significant the correlation between the debt-to-export ratio and the investment variables, while the debt service is significantly negatively correlated with investment; the point estimate of the crowding out effect is 0.35, which means that for every 3 percentage point GDP transferred abroad in debt service payment, investment decline by 2 percent point.

Pottillo et al (2000) finds evidence of the "debt overhang" hypothesis, since their estimate for 93 developing countries over the period 1969-98 shows that a large external debt reduces economic growth. He concluded that the overall impact of debt on growth is negative.

Clement et al (2004), show that a large foreign debt has adverse effects on economic growth and public investment and that external debt stock depress directly economic growth or development.

Chowdhury (2004), show that debt indicators have negative effect on per capital real GDP growth both in the heavily indebted poor countries (HIPCs) and Non- heavily indebted poor countries (non-HIPC). Furthermore, his evidence is constraint both with the "debt overhang" and the crowding out" effect, since debt stock and debt service have a significant negative impact on gross domestic product (GDP). As a consequence Chowdhury argues for an extension of the initiative to all the indebted countries, since huge external debt act as a constraint to economic growth and poverty alleviation.

4. Model and Data Sources

The model of the study is specified below:

$$GDP = f (EXD, FDI, INF, EXPT) \qquad\qquad 1$$

In econometrics, equation 1 can be transformed as:

$$GDP = \beta_0 + \beta_1 EXD + \beta_2 FDI + \beta_3 INF + \beta_4 EXPT + C \qquad\qquad 2$$

Where:

GDP = Real gross domestic product
EXD = External debt burden
FDI = Foreign direct investment
INF = Inflation
EXPT = Export

4.1 Data Sources

Data used for the study were obtained from various sources, the central Bank of Nigeria Annual report and statement of accounts as well as the statistical bulletin of the same institution. Data on real gross domestic product, external debt, foreign direct investment, inflation and export are obtained from federal bureau of statistics.

5. Empirical Results

The current specification and estimation of our model requires that we test the time series properties of the data in order to determine whether or not the variables contain integrated components, hence we used the Augmented Dickey Fuller (ADF) test, the cointegration test and the Ordinary least squares method.

Table 1: Summary of Ordinary least squares Results

INDEPENDET VARIABLE	DEPENDENT VARIABLE (GDP)
C	100809.3
	(4.041622)
	(0.0003)
EXD	0.22100
	1.687826
	(0.1003)
FDI	0.019486
	1.22456
	(0.2289)
INF	1788.701
	2.18696
	(0.0355)
EXPT	0.079478
	7.136928
	(0.0000)
R2	0.820173
R2	0.799621
F	39.90789
DW	1.8643

N.B Figures in parentheses represents the various t – values and probabilities

The result in table 1 shows that External debt burden (EXD) , foreign direct investment (FDI), inflation (INF) and Export (EXPT) have a positive relationship with economic growth (GDP), thus if EXD, FDI, and EXPT increased by a unit each GDP is expected to increase by 0.022100, o.o19486 1788.701 and 0.079478 units respectively. The positive impact of external debt burden on economic growth reflects a situation where by an economy GDP is growing without developing, this also reflect the situation in Nigeria despite the huge external debt, their GDP is still growing because Nigeria still contract further External debt. However, the result shows that external debt burden and foreign direct investment are statistically insignificant but positively related to economic growth this may be due to the fact that the borrowed external fund was not used for the purpose it was met for or misappropriated into personal pocket or saving or even kept in personal foreign Account through capital fright. Inflation and Export are statistically significant in explaining the level of economic growth in Nigeria. In the Nigerian case this may be as a result of the fact that a country that is heavily indebted still exports some of its products or the heavily indebtness of the Nigerian economy does not stop them from exporting their crude petroleum to other foreign countries which invariably will make economic growth to be significant.

The value of F- statistics with a value of 39.90789 shows that the equation has a good fit that is the explanatory variables are good explainer of changes in economic growth in the Nigerian economy. The Durbin Watson statistics with a value of 1.8643 illustrates the absence of autocorrelation among the variables in the model.

5.1 Unit Root Test

This tests the relevant variables in equation 2 which are stationary and equally to determine their order of integration. We equally use the Augmented Dickey fuller (ADF) test to find the existence of unit root in each of the time series. The summary of the ADF unit root test is presented in table two below.

Table 2: Summary of ADF unit Root test Result

Variables	Level Data	1st diff.	1% cri. value	5% cri. Value	10% cri. value	Status
GDP	1.349869	-3.906769	-3.6117	-2.9399	-2.6080	I (I)
EXD	-2.338248	-4.311264	-3.6117	-2.9399	-2.6080	I (I)
FDI	1.826535	-6.795090	-3.6117	-2.9399	-2.6080	I (I)
INF	-3.800062		-3.6117	-2.9399	-2.6080	I (0)
EXPT	-0.059131	-5.142529	-3.6171	-2.9422	-2.6072	I (I)

Source: Authors calculation using e- views

The result reveals that all the variables were not found stationary at levels. This can be seen by comparing the observed values (in absolute terms) of the ADF test statistics at the 1%, 5%, and 10% levels of significance. In the table above the result shows that GDP, EXD, FDI, and EXPT are all stationary after taking their first difference. Since all these stated variables were stationary at first difference and on the basis of this, the null of non stationarity is rejected and it is safe to conclude that the variables are stationary. This implies that the variables are integrated of order one i.e I (I). for inflation (INF) the variable was stationary at levels that is order of I (0).

6. Co- integration Test Results and Analysis

The result of the co-integration (that is the existence of a long term linear relation) is presented in table 3 below. Trace statistics and maximum Eigen value using methodology proposed by Johansen and Juselius (1990).

Having confirmed the stationarity of the variables at 1(1) we proceed to examine the presence or non presence of co-integration among the variables, when co-integrating relationship is present, it means that the variables have long run relationship. In the co-integrating result the likelihood ratio (LR) indicates a 2 co-integrating equations.

The summary of the Johansen co-integrating test result is presented below:

Table 3: Summary of   Johansen co-integrating test result

Null hypothesis	Alternative hypothesis	Eigen value	Likelihood Ratio	5% critical value	1% critical value
R= 0	R= 1	0.775894	105.7797	68.52	76.07
R=`1	R= 2	0.524577	48.94552	47.21	54.46
R= 2	R= 3	0.344938	20.69064	29.68	35.65
R= 3	R= 4	0.104444	4.615659	15.41	20.04
R= 4	R= 5	0.011092	0.423854	3.76	6.65

L.R test indicates 2 co-integrating equations at 5% significance level

The Johansen co-integrating test revealed that the likelihood ratio rejects the Null hypotheses of R=0 and R=1 of no co-integration and accepts the alternative hypotheses of a long run relationship. Overall a long run relationship exists among the variables.

Conclusively, the result shows that external debt burden is an important factor indicator that influences the level of economic activities in Nigeria.

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