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Debt Forgiveness and its Impact on the Growth of Nigerian Economy: An Empirical Study

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Abstract: Despite the debt forgiveness to the tune of $18 billion received by Nigeria from Paris club since year 2005 including the subsequent payment of $12 billion to upset the remaining debt, there is no evidence of accelerating pace of growth and development of the country. It is therefore, instructive to find out the direction and the extent of the effectiveness of the debt relief granted to Nigeria. This forms the objective of this study. The secondary data used for the investigation were processed using the ordinary least square packages. The result of the OLS model showed that the debt overhang problem of Nigeria has been alleviated by the debt relief package but the debt service relief did not positively influence the growth indicator. The results strongly support the need for tougher conditionality in future debt forgiveness initiative. Donor countries should monitor the allocation pattern of debt relief maintain the conditionalities and reward sound policies and improvements of governance quality in debtor countries.

Key words: Debt forgiveness, debt burden, economic stagnation, economic growth, donors, debt overhang

INTRODUCTION

The debt crisis of Nigeria reached a maximum proportion in year 2003 when the country was to transfer as much as $2.3 billion to service its debt. During these periods, the world leaders were granting debt relief to some highly indebted poor countries of the world. The IMF and the World Bank which initiated the move did not consider Nigeria as a poor country since it has oil. And since oil has maintained an all time high price range since 1999, getting relief was near impossible as the Paris club was not ready to listen to Nigeria. Meanwhile, President Olusegun Obasanjo in conjunction with his finance minister Okongo Iweala had prioritized securing debt relief from the creditor as a cardinal objective of his administration. This was essential because Nigeria already had a debt overhang problem which was having a debilitating effects on the economy in terms of the resources available to service debt, its crowding out effect on private investments and its constraint on the growth and development of the nation. However, one popular efficiency argument for the provision of the debt relief is the so-called debt overhang, which was evident in Nigeria. Thus, a strong justification really exists for the struggle for debt forgiveness initiated by the then administration. And since, it is evident that huge debt burdens was associated with low investment, poverty and low economic growth in Nigeria, the debt relief should have a stimulating effects on investment, alleviates poverty and trigger economic growth and development.

As a matter of fact, the objective of debt relief programme was to reduce the external debt of severely indebted poor countries to a sustainable level to enhance investment and further economic growth. It was highly expected that the debt forgiveness initiatives especially the Heavily Indebted Poor Countries initiate (HIPC) launched by the IMF and the World Bank in 1996 and 1999, respectively would set free HIPC resources for spending on the poor.

Consequent upon the foregoing argument, the HIPC initiative introduced some guiding principles regarding a country's eligibility for debt relief. To be considered for HIPC initiative assistance, a country must face an unsustainable debt burden, beyond traditionally available debt-relief mechanisms and establish a track record of reform and sound policies through IMF and IDA supported programmes. In the late 1999, the HIPC initiative was expanded in order to provide deeper and more rapid debt relief to a larger number of countries. The enhanced HIPC initiative (HIPC II) integrated debt relief plans into a comprehensive poverty reduction strategy requiring Poverty Reduction Strategy Papers (PRSP)s on broad-based participatory process as a necessary condition to qualify for debt relief. With this approach, the global donor community for the first time took governance structures in the debtor countries (at least implicitly) into account. Furthermore, the thresholds for sustainable debt levels were redefined and lowered to a debt-per-export ratio of 150% and debt-to-revenue ratio of 250%. The eligibility of a country is proved in a staged

process. If a country is deemed eligible, the debt relief is delivered at the so-called completion point. During the period of the initial decision point and the completion point, the progress of the country with respect to institutional reforms and structural adjustments is under observation and supported by the IMF and the World Bank. In practice, the time span between HIPC II and the completion point is rather large. Some countries are still waiting to reach the completion point.

Sequel to the approval of a 2 years policies support instruments that monitored Nigeria's economic reforms drive, Paris club agreed to write off 60% of the $30.85 billion owed to its club members. The deal was finally signed in July 2005. Thereafter, the country was able to offset the remaining 40% debt owed to Paris club. By march 2006, Nigeria owed nothing to Paris club. This debt relief eventually saved the country from the yearly $2.3 billion debt service burden. It was however proposed that this amount will then be available to be ploughed back and channeled to those areas that concern wealth creation, employment generation, agriculture, health, education, water supply, power generation and road construction.

The significant debt relief as a matter of fact should help the country's goal of reducing poverty, accelerating the pace of growth and development and provide some boost for the ongoing reforms and millennium development goals. One would expect that by now, 4 years after debt forgiveness to Nigeria, the country should be on the path of economic recovery characterized by improved power supply, greater budgetary allocation to health and education, reduction in unemployment rate, improvement in road network, improvement in the living standard etc. which will be a good sign with respect to the expected impact of recent debt forgiveness benefit. But to the contrary, the country appears to be deteriorating further with worsen power supply, higher rate of unemployment poorer road network and lower living standard.

There is no evidence of accelerating pace in the growth and development of the country. Rather what we have is the signal of economic stagnation characterized by double digit inflationary trend and set back in poverty alleviation initiatives. This situation is quite worrisome. It is instructive therefore to find out the direction and the extent of the impact of the debt relief on the economic growth of the country. This forms the basic objective of the study. In this study however, we analyze the effectiveness of the debt forgiveness. For this purpose, we ask whether or not the debt relief has been effective in stimulating economic growth.

Literature review

The rationale for debt relief: One popular efficiency argument for the provision of debt relief is the so called debt overhang. Several studies have examined the existence of a debt overhang in developing countries. Despite a few ambivalent and mixed results, the empirical literature mainly provides support of the debt overhang hypothesis. Deshpande (1997) finds the debt overhang effect to be valid for a small sample of 13 countries in the period from 1971-1991. Pattillo *et al.* (2002), using panel regressions for 93 developing countries over the period 1970-1999 for a group of 55 low-income countries. Imbs and Katada (1996) provide non-parametric evidence supporting the existence of a debt Laffer curve among developing countries. Their results indicate that debt overhang occurs when the face value of debt reaches 60% of GDP or 2000% of exports.

Since, both theoretical literature and empirical evidence suggest that huge burdens tend to be associated with low investment and low economic growth in low-income countries, debt relief might have a stimulating effect on investment and economic growth. This justification of debt relief seems to be quite convincing at first glance. But the clincher with respect to the resource position of low income countries and therefore to the capacity to pay their obligations at least in the short run and to invest is still the net resource transfer from donors including bilateral and multilateral aid which is of special importance for HIPCs. Since, the reduction of multilateral debt is partly financed by bilateral donors (e.g., through their contributions to multilateral funds) and these contributions usually come from the same political reservoir, namely the donor's aid budget, there might be a trade-off between debt relief and official development assistance (Birdsall *et al*., 2002). As Martin (2004) suggests, there is evidence of aid diversion to fund debt relief. However, the empirical study on additionality does not provide strong support for these qualms about it.

Ndikumana (2003) investigating the relationship between debt alleviation programmes and Official Development Assistance (ODA) does not find a direct causal link between the volume of debt relief or debt forgiveness, respectively and the volume of ODA disbursed, although the total supply of ODA and grants declined in the 1990s. Hernandez and Katada (1996) find a slight crowding-out effect between ODA debt relief and new lending from bilateral resources in a sample of 32 sub-Saharan African countries during the period 1989-1993. While, there is at least no clear-cut empirical evidence of a crowding out of ODA or other sources of finance by debt relief, there is no evidence for additionality either. In

the face of very little if not zero additionality, the question turns out to be whether it is better to have debt relief or more conventional forms of aid (Bird and Milne, 2000).

Furthermore, taking into account the net resource transfer given to highly indebted low-income countries, the incentive argument becomes more complex than in the traditional debt overhang theory. If the net resource transfer from donors is positively related to a country's level of indebtedness, the (dis) incentive effects of initial external debts and debt services to invest and to repay the credits may switch in the opposite direction. Bird and Milne (2003) show that higher levels of outstanding debt are usually associated with higher levels of net resource transfers from official sources.

This fact contradicts the hypothesis of debt overhang: countries that increase their capacity (and willingness) to pay are expected to receive less future resource transfers. These disincentives to introduce promising but costly adjustments do not occur because of the so called debt overhang of the tax on development, which stems from the declining share in aid budgets given to relatively successful developing countries. The researchers found that HIPCs indebtedness did not effect either investments or growth. In their findings the so called debt irrelevance threshold is situated between 50 and 60% of GDP. One explanation is that severely indebted low-income countries benefit most from the resource transfer provided by donors.

Birdsall *et al.* (2002) suggest that net transfers are larger in high debt and especially in the high multitlateral debt regimes. Countries with high debt ratios and high debts due to multinational institutions have received larger net transfers. This can be interpreted as a debt subsidy rather than a debt tax.

Considering these theoretical and empirical findings high debt burdens seem on the one hand to be detrimental to economic growth in low income countries. On the other hand because of the crucial role of net transfers especially through bilateral and multilateral aid and because of ambivalent incentive effects, it is far from sure that debt relief alone can enhance further economic growth in highly indebted poor countries. In the next sub-section, we will present a brief overview of the existing study on the effectiveness of debt relief.

Debt relief and its impact on growth: Any debt relief would be economically irrational if the success was low. Therefore, future policy measures should be based on careful analysis with respect to effectiveness (and efficiency). Is debt a proper instrument to reduce debt overhang, to diminishes poverty to increase growth and to improve governance structures Hernandez and Katada (1996) in analyzing grants and ODA debt forgiveness to 32 Sub-Saharan African countries, reveal that debt relief did not reduce the debt overhang of Sub-Saharan African countries at all but that the nominal debt stock of many countries even doubled between 1984 and 1993 and their arrears increased dramatically. The researchers suggest that it may be the case that it may be the case that the ODA debt which had been forgiven was not being serviced which indicates that debt relief activities have not freed additional resources for the recipient countries. They also find that receiving more debt relief did not increase a country's import capacity. Some countries that have received less debt relief have been able to expand their imports more than countries that have received debt relief to a substantially larger extent. Since, the written-off debt has not been serviced this shows that debt relief does not free resources.

Because the consensus of opinion in economic literature is that decent institutions and governance structures play a crucial role for economic development and growth, the question remains if debt forgiveness can be expected to contribute to improvement in governance quality in low-income countries, thus creating institutional conditions that are conducive to economic growth. Chauvin and Kraay (2005) show that debt relief in 62 developing countries between 1989 and 2003 did not improve the institutional quality nor lead to rising FDI or higher rates of economic growth. Easterly (1999) finds that highly indebted poor countries became highly indebted mainly because of poor policies not because of external shocks or wars. He estimates a statistically significant association between debt relief and new net borrowing in 40 HIPCs during the period 1989-1997. He concludes that official lenders did not adhere to prudential rules and the IMF and the World Bank provided far more financing to HIPCs over 1979 than to other developing countries of similar income levels, although the policies in many HIPCs have been worse. Given these rather unsatisfying results, the effectiveness of debt relief with respect to governance quality and economic development in low-income countries become highly questionable, because it might cause moral hazard and incentives to delay institutional reforms necessary for growth. Bauer (1991) raises moral hazard and disincentive issues, too claiming that the beneficiaries of debt relief are governments that have not fulfilled their obligations and have been allowed to do so very largely unscathed. Thomas (2001) points out that some HIPCs had no policy responses to poverty, Hiv/Aids or corruption until they were required to do so as conditions for debt relief under the HIPC Initiative. Therefore, he suggests unless debt relief is effectively conditioned on the proper use of funds and the pursuit of

structural reforms, it is unlikely to help the poor. Clements *et al.* (2005), using data for 55 low-income countries over the period 1970-1999, find that large debt burdens have not seriously hampered public investment in low-income countries and that in most cases debt relief has led to greater public consumption rather than investment that could have contributed to further economic growth. Taking into account that only a relatively small share of debt is supposed to be channeled into public investment, the impact of debt relief on growth will at best be modest.

To the contrary, Arslanalp and Henry (2005) on the other hand, show that the debt Restructuring and reduction under the Brady Plan led to rising asset prices, increased investment and foster growth in the 16 countries that received Brady deals between 1989 and 1995. According to the researchers, the Brady Plan worked quite well because debt relief was granted to a group of middle-income developing countries where debt overhang genuinely stood in the way of profitable new lending and investment.

It is far from certain that the positive results of the Brady Plan can be used to forcast the potential impact of further debt relief on HIPCs (Arslanalp and Henry, 2005). Consequently, Arslanalp and Henry (2006) do not expect that further debt relief will address the fundamental problem of inadequate economic institutions that impedes investment and growth in the world's poorest countries. In their opinion, the (indirect) approach of debt relief does little, if any good. Given the overwhelming evidence that debt relief cannot be expected to have notable positive effects on governance quality and economic growth, why do creditor countries actually grant debt forgiveness and what are the main determinants of the allocation of debt relief?

MATERIALS AND METHODS

This study discusses the methodology and theoretical significance of the study. Issues relating to the choice of research design and strategies, model, specification data requirements and sources, the nature and scope of data collected, the data processing technique and the theoretical significance of parameter estimate are discussed. The models were adjudged reliable before they were used. The components of the model were defined and a prior expectation of the relationship among the variables explained for the purpose of giving the reviewers and users a deep insight into the phenomenon under study.

Research design and strategies: The study uses quasi experimental research design approach for the data analysis. This approach combines theoretical consideration (*a prior* criterion) with the empirical observation and extracts maximum information from the available data. It enables us therefore to observe the effects of explanatory variables on the dependent variables.

Empirical model: The main question or hypothesis being addressed in this empirical analysis is whether debt relief granted to Nigeria has positively influence the economic performances proxy by the growth rates of gross domestic product. The positive growth rate of gross domestic product especially the GDP per capita explains in absolute terms the well-being of the economy generally and underscore the rate of development. Debt relief is expected to enhance the growth. There are two main channels through which debt relief may be enhancing growth: either by providing additional resources for public investment or if the debt relief is substantial enough by removing distortions cause by debt overhang. To capture this we specify an economic growth model that is fairly standard in the literature. This model permits the estimation of the relationship between the economic growth, debt relief and debt overhang variables using Nigeria data. The model is specified as:

$$Gyt = f(EDV, EDS, EXP, EXR) \quad (1)$$

Where:

Gyt = Growth rate of GDP
EDV = External debt overhang proxy by the total debt stock
EDS = External debt service relief proxy by yearly external debt services due
EXP = Export earnings
EXR = Exchange rates

In addition to debt relief, the other variables of interest included in the regression line have previously been used in the literature as determinants of economic growth and performances. Like debt relief, export earnings is assumed to be growth enhancing by providing resources for public investment that would otherwise not be undertaken due to lack thereof.

Taking the linear approximation of Eq. 1 the model becomes:

$$Gyt = a_0 + a_1EDV + a_2EDS + a_3EXP + a_4EXR \quad (2)$$

Adding stochastic error term to the model, Eq. 2 becomes:

$$Gyt = a_0 + a_1EDV + a_2EDS + a_3EXP + a_4EXR + ui \quad (3)$$

Table 1: Regression result (where Gyt is the dependent variable)

Variables	Coefficient	SE	t-statistic	Prob.
C	1455.595	813.006900	1.790385	0.1037
DSRt	0.526533	0.001478	0.484640	0.0025
DIRt	-608.9248	24.367430	-1.811691	0.0523
EXPt	1.687965	0.389441	4.334323	0.0015
EXGRt	-2.585414	1.048321	-0.082517	0.0196
R^2	0.964546	-	-	-
Adjusted R^2	0.950365	-	-	-
SE of regression	6.776589	-	-	-
Sum squared resid	4592216	-	-	-
Log likelihood	-1160228	-	-	-
Durbin-Watson stat	2.598975	-	-	-
Mean dependent var.	3334.620	-	-	-
S.D dependent var.	3041.705	-	-	-
Akaike info criterion	16.13637	-	-	-
Schwarz criterion	16.37238	-	-	-
F-statistic	68.01475	-	-	-
Pro (F-statistic)	00.000000	-	-	-

Data analysis

Where:

ui = The stochastic error term

a_0, a_1, a_3, a_s = The regression parameter to be estimated

On theoretical ground, (*a priori*) we expect the parameter to take positive signs meaning positive relationship between the dependent variables (GDP growth rate) and the explanatory variables external debt overhang, external debt relief, export earrings and the exchange rates.

Data requirement and sources: Given the nature of the model, it is imperative that the data that will permit the estimation of the stochastic equations representing the impact of debt relief on economic growth can be collected. These include: gross domestic output growth rate, debt service relief, exports earnings and exchange rate. Time series data were used for the study and they are purely secondary data. The data were obtained from Central Bank of Nigeria (CBN) and National Bureau for Statistics (NBS).

Data processing techniques: The secondary data used for the study were processed using the Ordinary Least Square (OLS) packages. These packages are suitable because they are time efficient in terms of output and adequacy of statistics generated. The empirical study uses a simulation approach to investigate the relationship between the economic growth debt relief and debt overhang variables (Table 1).

RESULTS AND DISCUSSION

The t-statistic and the standard error test revealed that the parameters were significant. For all the variables in the model, the values of standard error are less than half of the values of the coefficient of the variables. This shows that the data used for the computation are statistically significant. The result show that changes in debt stock relief, debt service relief, export earning and exchange rate determine the output growth in Nigeria in the current period.

The value of the coefficient of the independent variables; debt stock relief and export earnings manifest correct signs which is in consonance with the a priori expectations. Whereas debt service relief and exchange rate did not. This is to say that reduction in total debt stock enhances growth in Nigeria, whereas debt service relief did not. This proves that debt forgiveness has only removed debt overhang problem in Nigeria but did not enhance growth going by the negative relationship between the output growth and debt service relief.

Specifically, the result shows that a 1% of debt stock relief in the current period leads to 5.2% rise in output growth. Also, a 1% increase in export earning leads to 16.5% rise in output growth, whereas a 1% rise in debt service relief reduces output growth substantially during the period under study. According to this result, changes in export earnings have the highest influence on the output growth whereas changes in exchange rate hamper economic growth in Nigeria.

The value of the adjusted R^2 for the model is high, pegged at 0.950706 or 95.0%, which implies that debt overhang, debt relief, export earning and exchange rate explained over 95% systematic variation in economic growth over the observed years in the Nigerian economy while the remaining 5% variation is explained by other determining variables outside the model.

The value of Durbin Watson is 2.5 for the model. This fall within the determinate region and imply that there is a negative first order serial autocorrelation among the explanatory variables in the model.

CONCLUSION

This study discussed and investigated whether or nor debt relief granted to Nigeria is effective in improving its economic growth and development. We used Nigeria database to assess whether or not our data are consistent with the general thrust of the literature. The result of the OLS model (with white noise) show that the debt overhang problem of Nigeria had been alleviated by the debt forgiveness but the growth indicator was not positively influenced by the debt service relief which one would expect. We included the usual variables that determine growth and found that only export earnings were positively correlated with growth indicator. The economic relationship of the country with other countries

of the world measured by the exchange rate index has a negative and preponderantly insignificant effect on growth in the estimation. This variable did not show the expected sign. The only good thing found is that the country being an oil exporter is able to accumulate more foreign exchange earnings with the debt relief. The resources which were formerly transferred for debt service are now at least saved from capital flight. The answer to the question of the study-if debt relief has brought an improvement to the economic performances of the nation so far is therefore disillusioning. All in all, the findings suggest that the debt relief has not led to high economic growth in Nigeria. This result is similar to what were found in similar studies for some highly indebted countries, which have received debt relief.

One reason for the unsatisfactory results of debt relief is the inappropriate allocation pattern of the gains of debt relief. Governments of the creditor countries must have granted debt relief to Nigeria rather because of political than of economic reasoning. One can confirm a path dependence with respect to the debt relief granted as institutional quality and good governance were not taken into account in the discussion-making processes of the creditor countries. Nevertheless, before the result is taken for granted, more research is necessary into the governance quality with respect to the allocation pattern of debt relief. It remains to be seen whether or not the policy-makers are mindful of the rationale behind the debt forgiveness. The results strongly support the need for tougher conditionality in future debt forgiveness initiative. Donor countries should monitor the allocation pattern of debt relief maintain the conditionalities and reward sound policies and improvements of governance quality in debtor countries.

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