

Ghana's Highly Indebted Poor Country Initiative and External Debt Sustainability

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Abstract

This paper examines Ghana's experience with external debt and debt relief measures, specifically, Ghana's experience with the Highly Indebted Poor Country (HIPC) initiative and the relevance to poverty reduction. The Ghana government's attempt to improve its record on social development led to the HIPC initiative in February of 2001. The HIPC initiative is expected to free significant budgetary resources for Ghana's poverty reduction strategy, hence enabling the country to implement the development goals set out in the PRSP. The paper examines the performance of the social sector reforms within the context of the Poverty Reduction Strategy Paper (PRSP). It must be stressed that the implementation of social reform programmes to solve these problems requires additional resources to those resources that are currently projected from domestic and donor sources. There is likely to be a resource-financing gap in the implementation of Ghana's social development programmes, especially as it relates to expenditure. Indicatively, Ghana would require more money to implement social policies to alleviate poverty. A critical aspect of the paper would look at how sustainable Ghana's debt is. Specifically, the paper would look at the extent to which a critical component of the debt, the debt service payable, is reduced so as to make Ghana's debt service to GDP ratio 2% from year to year. And within the context of poverty reduction, the reduction in debt service payable would be evaluated to determine whether it would contribute to poverty reduction.

Introduction

The purpose of this study is to find out whether or not Ghana's external debt is sustainable. The paper is organized as follows; section one would deal with the following key points:

- To argue that Ghana's HIPC was / is expected to channel funds from debt payments to poverty alleviation.
- To show how Ghana is involved with HIPC.

- To define 'debt sustainability' within the context of Ghana's HIPC.
- To explain how much debt reduction (within the context of Ghana's HIPC) is required in order for Ghana's debt to be sustainable.
- The main conclusions of (a) to (d) above.

Section two would seek to provide a literature review on the debt overhang theory; identify the key literature and explain why I find this relevant to the study; and conclude on the issue of the debt overhang literature and review it as being inconclusive. Section three focuses on debt sustainability analysis. It considers factors that influence the participation of poor people in growth. It dwells also on macro factors and policy; pro-poor spending as it relates to health and education especially. The overall objectives of section three are to determine whether or not Ghana's external debt is sustainable; and to further determine whether or not the sustainability or unsustainability of Ghana's debt would lead to poverty alleviation. Section four evaluates the analysis of data as they relate to debt sustainability and the variables of interest, and the implication for poverty alleviation; while section five considers recommendations and conclusion.

Debt as a problem

Normally, governments borrow to finance anticipated gaps in their expenditure programmes. This funding gap may be in the budget, recurrent or development expenditure, or in the Balance of Payments: the clearing account of the country's external obligations with the rest of the world. There is therefore, no doubt that borrowing plays a vital role in stabilizing economic and social aggregates.

Literature on external debt

A channel via which a large debt is considered a hindrance to growth is the "debt overhang" hypothesis. With the debt overhang, a country's high debt burden serves as a disincentive to investment, as investors are of the expectation that future taxes on returns to capital would be imposed to service the debt (Moss et al. 2003). Theoretically, that debt relief should be provided until the debt overhang is removed: until debt sustainability is achieved. For Ndikumana (2000) Sub-Saharan African countries generally indicate a negative relationship between external debt and domestic investment. High debt could decrease investment, as a higher proportion of domestic output is used to meet debt obligations. Third that high external debt levels decrease investment, as they make the macroeconomic environment more uncertain.

For Lensink and Morrissey (2000), the extent to which aid impacts on growth is dictated by the uncertainty of aid inflows. Specifically, aid uncertainty is significantly inversely related to growth: a robust result. In other words, the easy prediction by recipients to predict future aid inflows may in turn determine more investment and hence better fiscal planning. Niels et al. (2001) investigate how annual debt service reduces the level of financing government development policies. Uncertain annual debt service payments result in slowdown of private investment and lower economic growth. Deshpande (1997) explores the debt overhang hypothesis using an empirical examination

of the investment experience of 13 Severely Indebted Countries. For the sample of 13 countries under investigation the debt overhang effect is significant. Clemens et al. (2003) investigate the channels through which external debt impacts on growth in low income countries, with the following results:

- High debt levels could depress economic growth in low-income countries. Debt seems to affect growth via its effect on the efficiency of resource use, rather than via its depressing effect on investment. The thrust of Clemens et al. (2003) is that even in the absence of debt, the extent to which the available resources are used, that is efficient resource utilization or capacity utilization, would in part, determine how an economy grows.
- External debt has an indirect effect on growth via its effect on investment. On average, every 1 percentage point increase in debt service as a share of GDP reduces investment by about 0.2 percentage point.

Patillo et al. (2004) examine the medium through which debt affects growth, precisely whether debt affects growth via factor accumulation or total factor productivity using a panel dataset of 61 developing countries between 1969 and 1998. On average, the results indicate that doubling debt from any initial debt level at or above the threshold will reduce per capita growth by about 1 percentage point. Cohen (1993:437-449) evidenced that a large debt was not an unconditional predictor of low investment, nor did it result in abnormally low investment. However, the actual service of the debt crowded out investment. For rescheduling countries, 1% of GDP paid abroad reduced domestic investment by 0.3 percent of GDP. Boreinsten (1990) evaluates how foreign debt affects investment in a heavily dependent country. The outcome is that credit rationing may be a disincentive to investment. To maximize the impact on productive investment, debt reduction plans need to be accompanied by additional foreign lending.

Birdsall (2002) indicate that the HIPC programme of debt relief will free resources in high debt countries for spending for the poor. Additionally, that even without additional donor resources, debt relief, by encouraging selectivity, would at least ensure more funds for countries with good policies and adequate institutions. The results indicate that better donor behaviour would not only enhance developing outcomes in such countries in the short run, it would also set the stage for more effective development assistance in the long-run. Sundaresan and Wang (2006) model "dynamic" investment financing and default decisions of a firm which begins its life with a collection of growth options. In the presence of pre-existing debt, the firm defers its default decisions in order to preserve future growth options exercising decisions due to the standard debt overhang argument.

Although the debt overhang hypothesis may seem potent for explaining reduced growth and investment patterns, together with increased negative net transfers, the empirical evidence is inconclusive. The broad point or thrust of the literature review is that the absence of robust findings indicates that there is relatively little empirically about

the cross-country effects of external debt on growth. On balance of the various empirical studies, the results are mixed.

Data used

Initial investigations indicate that data on external debt and other data series are fraught with conceptual and practical problems. All data (secondary data) for the analysis are from IMF and IDA (2002)¹. The intention is to commence with changes in the terms of trade variable between the years 1980 and 2002 together with changes in price movements of primary products to explain the external debt position of Ghana. The next phase would be a brief review of the external debt stock and the implications for Ghana.

In the various data analyses, where appropriate, the growth rates for the indicators of interest are calculated for various years. From these growth rates, the total and the average growth rates are calculated. For instance, the calculation of GGNI (in column 7 of Table 1) for 1990 is as follows: $GGNI_{1990} = [GGNI(1990) - GGNI(1980)] / [GGNI(1980)]$. The GGNI (1990) is the growth rate of GNI (Gross National Product) between 1990 and the year immediately preceding 1990 (1989). 1980 to 2002 is 10 years, and so, the average GGNI between 1980 and 2002 for example, would be the total of all the GGNIs calculated divided by 9.

The summation and average functions in EXCEL are used to calculate the total and average. This method would be used in most of the tables.

Table 1: Debt service indicators and some macroeconomic indicators

Year	EDT	INT	TDS	GTDS	GNI	GGNI
1980	1,402	53	159		4,426	
1990	3,837	106	367	1.30817	5,774	0.30456
1996	6,402	151	480	0.30790	6,782	0.17457
1997	6,313	160	555	0.15625	6,750	-0.00471
1998	6,933	192	579	0.04324	7,322	0.08474
1999	6,979	175	519	-0.10362	7,547	0.03072
2000	6,625	155	465	-0.10404	4,831	-0.35987
2001	6,734	98	314	-0.32473	5,201	0.07658
2002	7,738	95	211	-0.32802	6,030	0.15939
Total				1.05877		0.46958
Average (%)	12.03			10.61	0.1176	0.05217
<hr/>						
Year	EDT/XGS	EDT/GNI	TDS/XGS	INT/GNI	RES/EDT	
	%	%	%	%	%	

¹ Data for the entire analysis from: IMF and IDA;
<http://www.imf.org/external/np/hipc/2002/gha/ghadp.pdf>

1980	115.5	31.7	13.1	1.2	23.5
1990	385.3	66.5	36.8	1.8	8.1
1996	360.1	94.4	27.0	2.2	14.5
1997	369.7	93.5	32.5	2.4	9.8
1998	267.9	94.7	22.4	2.6	6.6 1999
	277.1	92.5	20.6	2.3	7.7
2000	266.2	137.1	18.7	3.2	4.7
2001	273.6	129.5	12.8	1.9	5.6
2002	279.2	121.7	3.6	8.7	2.2

Year	XGS	MGS	TOT	GTOT*100	GXGS
1980	1,214	1,264	0.96044		
1990	996	1,624	0.61330	-0.36144	-0.17957
1996	1,778	2,557	0.69534	0.133778	0.78514
1997	1,708	2,791	0.61196	-0.11992	-0.03937
1998	2,588	3,814	0.67855	0.108814	0.51522
1999	2,519	4,073	0.61846	-0.08856	-0.02666
2000	2,489	3,474	0.71647	0.158474	-0.01190
2001	2,461	3,699	0.66531	-0.07141	-0.01124
2002	2,628	3,516	0.74744	0.123446	0.06785
Total			6.30727	-0.01298	1.09947
Ave. (%)			0.70080	-1.298	0.12216

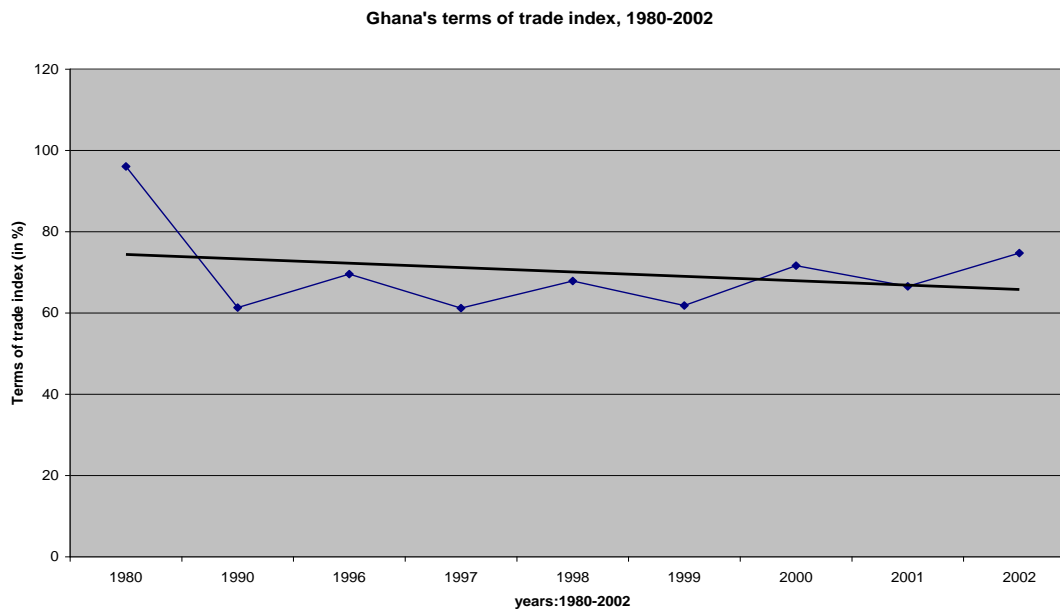
Source: Global development Finance (2004:228)

- EDT: Total debt stock
- INT: Interest payments
- TDS: Total debt service paid
- GTDS: Growth rate of total debt service paid
- GGNI: Growth rate of gross national income
- XGS: Exports of goods and services
- EDS: External debt stock
- EDI: Total debt
- RES: International reserves
- GTOT: Change in TOT

From Table 1 above, the growth rate of GNI is 5.21%, the growth rate of XGS is 12.21%, the growth rate of TOT is approximately -1.3%. In effect, on average, for every 1 dollar

earned from Ghana's exports, 1.3 dollars are lost to the rest of the world by way of imports to Ghana. The terms of trade are against Ghana. The growth rate of the GNI is 5.21%, and the growth rate of the TDS is 10.61%. Quite clearly, in using the flow concept, the percentages for the leakages (the GINT =12.03%, the GTDS = 10.61% and the GTOT adverse terms of trade) exceed the growth rate of national income (GNI = 5.21%: GNI and GDP differ by factor income from abroad. GDP figures not available, and so GNI used).

Figure 1: Ghana's terms of trade, 1980-2002



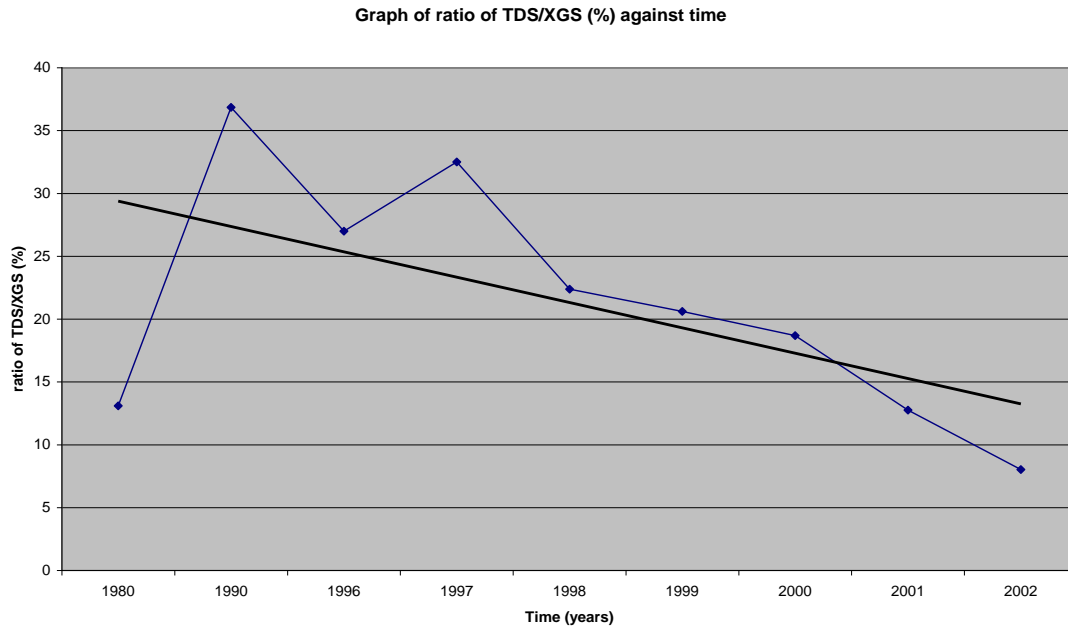
Source: Drawn from analysis of data at: Global Development Finance (2004: 228)

From Figure 1, the terms of trade for Ghana generally trends downwards between 1980 and 2002. This is in part due to falling mineral prices and increasing crude oil and natural gas prices. In 1993, the gold price index was 93.8, in 1997 it was 86.3, and in 2000 it was 72.7. In effect, there was a decrease in price index of approximately 21 percent 1993 and 2000 in respect of mineral prices. As regards the price index of gold, it was 87.6 percent in 1993, decreasing to 63.1 percent in 2000, a decrease of 24.5 percent. For petroleum, the average crude price was 16.79 in 1993, rising to 28.23 in 2000, indicating an increase of about 40.5

percent, which then sought to increase the energy bill. As regards government finance, there was a deficit of 97.3 billion cedis in 1993. As of 1994, there was a surplus of 111.7 billion cedis. However, Ghana registered a deficit in government finance of 335.5 billion cedis in 1996, increasing to 1, 048.80 cedis in 1998.

In effect, there was an increase of about 90.7 percent in government deficit between 1993 and 1998. In wake of the 2004 price increases of petroleum products on the world market, the Ghana government envisages using the TOR Debt Recovery Fund, expected to yield 1.2 trillion cedis to partly fund the subsidies for the delayed petroleum price adjustment (IMF: 2004:50).² In line with Osei (2000), movements in the ratio of debt service payments to exports of goods and services, and total external debt to income are the two most important indices in assessing the debt burden. The higher the ratio the greater the debt burden.

Figure 1a



Source: Drawn from calculation of data at Global Development Finance (2004)

Figure 1a above is a graph of the ratio of debt service payments to exports of goods and services against time ((ratio of TDS/XGS) against time). Figure 1a quite clearly shows a decreasing ratio of TDS/XGS; in line with Osei (2000).

Table1a
Regressing GNI on TDS/XGS and EDS/GNI
Dependent variable: GNI
Regression Statistics
 Multiple R 0.392796

² http://www.cepa.org.gh/archives/research-working-papers/2003/Managing_an-Economy_in_a_HIPC_2003.doc, Managing an Economy in a HIPC-Constrained Environment.

R Square	0.154289					
Adjusted R Square	-0.12761					
Standard Error	1175.328					
Observations	9					
ANOVA						
	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	2	1512108	756054	0.547311	0.604875	
Residual	6	8288382	1381397			
Total	8	9800490				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	4756.871	1757.42	2.706736	0.035259	456.6199	9057.122
TDS/XGS (%)	47.02	44.945	1.046168	0.335787	-62.9564	156.9964
EDS/GNI (%)	3.342874	12.8853	0.259433	0.803973	-28.1863	34.87207

Source: Drawn from calculation of data at Global Development Finance (2004)

Table 1a shows the regression of GDI on TDS and EDS on GNI. The dependent variable is GNI. The t-statistic values for the variables TDI/XGS and EDI/GNI are 1.05 and 0.25 respectively. And as their p-values are each greater than 0.05, each of the variables acting independently has no statistically significant effect on the GNI variable. The decision is therefore to accept the null hypothesis in respect of the alternative hypothesis, that the TDS/XGS and EDS/GNI have no statistically significant effect on GNI and hence decrease with time. The calculated $F = 0.547$ (for the alternative hypothesis) is less than the observed $F = 0.605$ (for the null hypothesis). The decision is to accept the null in favour of the alternative hypothesis and conclude that the two variables (TDS/XGS) and EDS/GNI acting in tandem have no statistically significant effect on GNI. In effect the hypotheses from the t and f-statistic values indicate that the two variables decrease with time. That is to say that they are in line with Osei (2000). It must be stressed that the time series (years) for the data are not consecutive. Second, the sample size of 9 is quite small to make a robust analysis. Third, that the degree of freedom for the analysis, 6, is too small (the sample size (of 9) less the constant term (1) and the variables (TDS/XGS, EDS/GNI)). The statistic (parameter values) and the analysis carried out are indications.

Debt service to GDP ratio (%), 1997-2020

According to Birdsall et al. (2002:80-82), decision point HIPC's derive about 20 percent of their GNP in tax revenue. For them, the ideal expenditure on debt service as a percentage of revenue for countries should be expected or required to be no more than 10 percent of 20 percent of GNP. That is, countries should spend no more than 2% of their GNP on servicing debt. The methodology used in respect of calculating X (amount by which DSP

is reduced to restore DSGDPR to a constant 2%) is based on the approach of Birdsall et al. (2002:80-82).

Table 2: Debt service to GDP ratio (%), 1997-2020

Year	Remark	DSGDPR	DSP	DSRR	GDP	2% of GDP
1997		7.6	523	48.6	6,884	137.68
1998		7.5	560	41	7,474	149.48
1999		6.7	521	53.4	7,774	155.48
2000		11.2	560	82.1	5,000	100
1997-2000	Ave. BDR	8	541	52.8	6,783	135.66
2001-2010	Ave. proj.	4.6	369	24.8	8,021	160.42
2011-2020	Ave. proj.	3.5	565	18.5	16,174	323.48
2001-2011	Ave. proj.	4.7	377	27.6	8,021	160.42
2011-2020	Ave. proj.	3.5	565	18.6	16,174	323.481

Year	DSGDPR	XGS	150 % of XGS	X
1997	7.597327135	2,231	3346.5	385.32
1998	7.492641156	2,532	3798	410.52
1999	6.701826601	2,473	3709.5	365.52
2000	11.2	2,440	3660	460
1997-2000	7.975821908	2,419	3628.5	405.34
2001-2010	4.600423887	3,426	5139	208.58
2011-2020	3.493260789	6,669	10003.5	241.52
2001-2011	4.700162075	3,426	5139	216.58
2011-2020	3.493260789	6,669	10003.5	241.52
Total				908.2
Ave.				227.05

Source: <http://www.imf.org/External/hipc/2002/gha/ghadp.pdf> , p.45.

GSGDPR: Debt service to GDP ratio

BDR: Before debt relief

ATR: After traditional debt relief

Ave: Average

DSP: Debt service to payable

DSRR: Debt service to revenue ratio

XGS: Exports of goods and services

150%

of debt stock: HIPC debt stock

X: Amount by which DSP is reduced to restore DSGDPR to a constant 2 Percent

Ave.: Average

Calculating the various values of X:

For instance, the X value for 1997 is calculated as:

$X = 523 - (6,884 * 0.02) = 385.32$. This relation is used to calculate the other values of X. Therefore, $X = DSP - (GDP * 0.02)$. The 0.02 (2%) is used since the intention is to reduce the various DSGDPRs to a constant: 2% for each of the years or periods between 1997, 1998, 2011-2020.

The third column of Table 2 shows the projected debt service to GDP ratio between 1997 and 2000 for BDR (Before Debt Relief) and 2001-2020 for ATDR (After Traditional Debt Relief). GDP is used, and not GNP, as the author could not obtain GNP data. However, the difference between GNP and GDP differs only by the net factor income from abroad. Column 6 presents the GDP. It is not clearly stated whether (ATDR) after traditional relief means post enhanced HIPC relief. For the basis of the analysis, the author assumes that ATDR is post enhanced HIPC relief. Between 1997 through to 1999, DSGDPR (debt service to GDP ratio) generally decreased from 7.5 to 6.7, with a maximum DSGDPR of 11.2 in 2000. Between 1997-2000 and 2011-2020, the DSGDPR was more than halved from about 8 to 3.5.

Evaluating the analysis

The intention now is to consider whether the debt service indicators mentioned in the study within the context of HIPC are beneficial for Ghana and for poverty reduction. Most of the debt service indicators used in the study were favourable for the period(s) considered. Quite clearly, overly optimistic projected assumptions of GDP growth, increases in terms of trade and growth in domestic investments produced results that tended to indicate that Ghana's debt is sustainable. A section of the analysis indicates that the debt service to GDP ratio was in excess of the required 2% to keep the debt sustainable from year to year. If the debt service to GDP ratio were kept at the required 2% for example in 1997-2000, the extra 6% (or less, depending on the amount of debt relief) that would have gone into debt servicing could be directed at poverty alleviation programmes: building hospitals, primary schools, and the provision of potable drinking water. In so doing, it is essential that spending that is directed at poverty alleviation be carried out in a way as to have effective capacity utilization. In Ghana's case, the threshold of sustainability could be linked to indicators such as the terms of trade and the growth rate of GDP and the debt service payments.

Addressing poverty

In the view of Collier et al. (2001) the extent of poverty in low income economies is dictated in part by those countries' policies and institutions, and that developing countries' governments should improve policies and institutions so as to reduce the costs associated with poverty in a bid to lift people out of poverty for a given aid volume. Additionally, that the reduction of poverty depends on the credibility of the economic policy employed. Specifically, there should be a good, credible enabling environment to encourage resources to be channelled into savings and investment. In so doing, foreign

aid (or debt relief) would serve as a catalyst to hasten poverty reduction: via the provision of public services.

Recommendations and conclusion:

In assessing the effectiveness of foreign aid in reducing poverty, the impact of foreign aid on human development indicators must be observed and appropriate measures taken. For Masud et al. (2005), there must be a significant, positive impact of the past year's share of health in total expenditure on the percentage of expenditure allocated to health in the present period. Factually, as bilateral aid does not alter government spending on health, it would suggest that there is "no additionally", indicating that bilateral aid is "fungible". In effect, if aid increases non-aid financial expenditures would decrease.

Macroeconomic challenges

Cordella et al. (2003) are unclear as to whether regaining access to private credit markets can promote poverty alleviation aims of altruistic donors, as official creditor donors cannot coordinate. For them, the government regains repayment as it regains access to credit. And from a donor's view point, the resources might be more efficiently used for social welfare expenditures to improve the conditions of the poor. In relation to current account deficits, an issue of interest is whether or not the imbalances associated with that deficit are sustainable. For Wachtel (1998), the current accounts imbalances can change quickly "as an increase in GDP will quickly generate much more rapid increases in consumption and investment". In his view, moderate current account deficit may be easy to finance for a period as capital moves from official sources will be replaced by capital flows from private sources. Also, that moderate debt and interest burdens will encourage such flows. That notwithstanding, "the capital inflow fatigue" phenomenon may set in early. And as direct and financial investments require an environment that is friendly to capital inflows, the development of legal and accounting frameworks should be strengthened to provide investors with "some certainty of control". An environment that supports inward investment must be supportive of entrepreneurial activities, and provide the financial and legal services for venture capital, bank lending and other forms of finance.

Absorbing shocks

Fluctuating prices for a country's exports reduce income in the private and public sectors. Through direct and indirect effects, shocks could significantly reduce growth. In the case of Ghana, the drop in prices for commodity exports from, by lowering real income decreased investment and consumption.

Fiscal Policy

The need to understand and analyse the factors that are associated with strong fiscal effort could offer policy lessons. Fiscal effort, if it is predicted, can be compared to actual fiscal effort so as to have a sense of whether the economy is doing well as it could, given its unique circumstances. Ultimately, a key policy lesson is that stronger institutions

could allow the economy to sustain higher levels of debt, and therefore resort to a relatively more gradual fiscal adjustment path (IMF 2005).

Getting the exchange rate right

A challenging problem in Ghana is getting the exchange rate right: what constitutes the equilibrium real exchange rate. Morrissey and Opoku-Afari (2004) emphasize the importance of fundamentals in determining the equilibrium exchange rate in Ghana by dwelling on the effects of capital inflows (by decomposing capital inflows into official inflows, “permanent” inflows and “non permanent” inflows between 1966 and 2000. The indication is changes in exports are the major driver of exchange rate misalignment. In addition, the real exchange rate is slow to adjust back to equilibrium, indicating policy inflexibility. In line with Morrissey and Osei (2004), policy makers must decompose the capital inflows (official, “permanent” and “non-permanent” to enable them establish the magnitude and direction of their impact on real exchange rate in both the long and short run, as different types of capital inflows have different implications on real effective exchange rate in the short and long run. Ghana, as well as having a considerable export potential, and the land reform issue as well as improved infrastructure are vital for this. The government has for a long time avoided tackling the land issue as it is politically sensitive. However, the land tenure system is vital for transforming agriculture.

Conclusion

The objective of the study is whether Ghana’s external debt within the context of the HIPC was sustainable, and whether the sustainability or otherwise of the debt would lead to poverty alleviation. The benefits of the PRS although commendable, were not very encouraging especially in the areas of primary school enrolment.³ An analysis of the study (Osei et al. (2001)) indicated that Ghana spends more on servicing her debt than it does on recurrent and capital expenditures on health and education spending. This needs to be reversed. Within the context of the study as revealed by the analysis of data, Ghana’s external debt was generally found to be sustainable.

It must be stressed that the study did not consider all the factors that could have possibly contributed to external debt, for instance the effect of liberalization especially in regard to exchange rates. For reduction in poverty to take place, debt relief is not the solution. Rather, the underlying issues of external debt would have to be tackled. This is more of a policy issue, which may be considered in future studies.

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³ PRS: Poverty Reduction Strategy

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