



**Institute of Social Studies**

Graduate School of Development Studies

## **EXTERNAL DEBT SUSTAINABILITY AND THE ROLE OF THE HIPC INITIATIVE IN SUB-SAHARAN AFRICA**

A Research Paper presented by:

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(UGANDA)

In Partial Fulfillment of the Requirements for Obtaining the Degree of:

Master of Arts in Development Studies

Specialization:

**ECONOMICS OF DEVELOPMENT**

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The Hague, December 2006

**This document represents part of the author's study programme while at the Institute of Social Studies; the views stated therein are those of the author and not necessarily those of the Institute.**

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*This Paper is  
Dedicated to my lovely parents  
Nancy Elsa Kateregga and John Ateker Ejalu  
And Brothers  
William Ejalu, David Ejalu and Daniel Ejalu*



## *Acknowledgements*

My deepest gratitude goes out to the organizers of the *Netherlands Fellowship Program* through which I was able to get a chance to study in the Netherlands at the Institute of Social Studies. Studying at the ISS has been one of the most rewarding events in my life and I have been able to meet my goal of completing my master's degree.

There is a proverb that states that, *'If you wish your merit to be known, acknowledge that of other people.'* Thus I would like to return thanks to my first supervisor *Karel Jansen* for giving me encouragement and direction in writing my research paper. His guidance helped me get a deeper understanding of my research work. Thanks to my second supervisor *Lorenzo Pellegrini* for his ingenious comments after my presentation that helped me improve on this thesis. I also give merit to my lecturer *Howard Nicholas* and all my lecturers in ECD without whom I would not have had such a gratifying experience.

Special thanks to *Admasu Shiferaw* a PHD finalist here at ISS for the intellectual support and inspiration he gave me throughout my research and academic work. It was of great value to me. I recognize *Albert Musisi* also a PHD finalist for sparing his valuable time for discussion and encouragement during my academic struggles.

Finally my appreciation goes out to some of my friends at ISS; *Gebre Halefom Yemane, Doreen Kiggundu, Jacqueline Wabyona, Weini Zemichael, Calvin Habasonda, Lillian Kilwake* and *Catherine Nassaka*, My colleagues from Bank of Uganda; *Oscar Edwin Kiiza* and *Emmanuel Ssemambo*. They supported me in various ways.



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## List of Acronyms

|        |   |
|--------|---|
| FDI    | Foreign Direct Investment                             |
| GDP    | Gross Domestic Product                                |
| GNI    | Gross National Income                                 |
| HIPCs  | Highly indebted Poor Countries                        |
| IDA    | International Development Association                 |
| IMF    | International Monetary Fund                           |
| MDGs   | Millennium Development Goals                          |
| MDRI   | Multilateral Debt Relief Initiative                   |
| NPV    | Net Present Value                                     |
| OECD   | Organization of Economic Co-operation and Development |
| PRSPs  | Poverty Reduction Strategy Papers                     |
| SDE    | Small Developing Economies                            |
| SSA    | Sub-Saharan Africa                                    |
| UNCTAD | United Nations Conference on Trade and Development    |
| WB     | World Bank  |



## **Chapter I: Introduction**

### **1.1 Background Information**

External Debt sustainability can be defined as the ability of a country to meet its current and future external debt-service obligations in full, without recourse to debt relief, rescheduling, or the accumulation of arrears (Trotsenburg and MacArthur 1999). It is important that an economy achieves sustainable external debt since empirical evidence suggests a relatively strong statistical relationship between high debt burdens and poor economic performance, such as low growth, investment and human development (Cohen 1996). Theory suggests that these adverse effects of debt will be transmitted through cash flow effects coming from reduced public expenditure and disincentive effects associated with a large debt overhang. Empirical evidence in sub-Saharan African countries has shown that expenditure on infrastructure, educational and health facilities have been limited hence economic growth foregone because of high public debt service (Fielding 1997; Gallagher 1994; Sahn 1992). A public debt overhang for instance can affect macroeconomic stability through an increase in the fiscal deficit, the exchange rate, monetary expansion and inflation from monetising debt service obligations, and recourse to exceptional financing (such as payments arrears, debt relief and debt rescheduling). This tends to raise uncertainty about the future debt service profile of a country which in turn could lead to fiscal distress and a disincentive for the private sector to invest.

The debt problem in Sub-Saharan Africa (SSA) started due to heavy borrowing in the 1970's in order to develop infrastructure and industries. For these countries, public expenditure depended on capital inflows from official sources. Although the availability of external finance was stable, these flows served to finance public spending which was because the donor conditionality had a bias towards non-traded goods. External and internal balances had to be faced by these economies but the problems were particularly severe for the group of primary commodity exporters. Debt service ratios were rising because of mounting debt, higher interest payments and declining export earnings.

Other factors that contributed to the debt problem were drought, war, weak economic performance, poor governance and accelerated external borrowing solely to service existing debt which is commonly referred to as the 'Ponzi game.'

Debt relief efforts mainly by the bilateral creditors were made to help these countries solve their debt problems. Debt relief efforts can be traced back to 1977–79 when, in a United Nations Conference on Trade and Development (UNCTAD) meeting, official creditors wrote off \$6 billion in debt to 45 poor countries by eliminating interest payments, rescheduling debt service, untying compensatory aid, and offering new grants to reimburse old debts (Easterly 2002). In 1987, the Special Program of Assistance for Africa provided bilateral debt relief where International Development Association (IDA) credits for World Bank debt service relief, and funding for commercial buybacks to 21 African IDA-only borrowers that had debt service to-exports ratios above 30 percent was initiated. Additional debt relief efforts continued with initiatives such as the Paris Club Toronto Terms (1988), Brady Plan (1989), IDA Debt Reduction Facility (1989), Paris Club Houston Terms (1990), Paris Club London Terms (1991), and Paris Club Naples Terms (1995) (Anthony and Kamau 1997).

The traditional debt relief mechanisms mainly emphasized the adoption of stabilization and economic reform programs, rescheduling agreements and new financing on appropriately concessional terms and bilateral forgiveness of debt. However, the fact that bilateral debt was being forgiven while multilateral debt was not resulted in a build up of debt due to increased borrowing from multilateral sources. By the mid-1990s, International financial institutions and advanced industrial countries marked officially that existing programs for improving the financial situation of heavily indebted poor countries were not working. Thus, in 1996 the Highly Indebted Poor Countries (HIPC) initiative was formed by the International Monetary Fund (IMF) and the World Bank (WB).

Following the original HIPC initiative, the enhanced HIPC initiative was introduced in September 1999 to strengthen the links between debt relief, poverty reduction and social policies as part of the global effort towards achieving the Millennium Development Goals<sup>1</sup> (MDGs). The objective was to bring the countries' debt down to sustainable levels and provide a permanent exit from rescheduling plus freeing up resources for social spending (World Bank Report 2003). To qualify for HIPC assistance or to reach the Decision Point, a country must have;

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<sup>1</sup> Refer to Appendix-A for a list of the MDGs.



- i) An unsustainable debt burden beyond traditional debt-relief mechanisms determined by a Net Present Value (NPV) of;
- Debt to export ratio of 150%
  - Debt service ratio of 20-25%
  - Debt to government revenue ratio of 250%.
- ii) Implemented IMF and World Bank policies.
- iii) Developed a Poverty Reduction Strategy Paper (PRSPs) through a broad based participatory process.

In order for a country to receive its full relief committed at the decision point or to reach its Completion Point, the country should have satisfactory implementation of key policy reforms agreed at the decision point, it should have maintained macroeconomic stability and adopted and implemented at least one year of the PRSPs. The total dissemination of debt relief should bring the existing debt stock to the pre-determined sustainable level. Currently 18 countries are past the completion point, 10 countries are at the decision point, 10 at the pre-decision point and 8 are yet to qualify (Refer to table A1 in appendix-A). The difference between traditional debt relief mechanisms and the HIPC initiative is that under HIPC initiative bilateral donors give more debt relief than under standard debt restructuring and it also covers the debt of multilateral donors. The estimated total amount of HIPC debt cancellation to the 28 countries still in the HIPC process is \$38.2 billion (World Bank Report 2006). The philosophy of the HIPC initiative is that an increase in debt relief should lead to sustainability.

## **1.2 Problem Statement and Argument.**

Despite the glamorous intentions of the HIPC initiative organizers, the debt ratios of the HIPC post completion point countries have deteriorated which suggests that they are not yet on a sustainable path with some HIPCs already unsustainable. With reference to table 1 below, out of the 18 post completion point countries, 14 are from Sub-Saharan Africa and of the 14 Sub-Saharan African countries, only 7 are currently sustainable<sup>2</sup> namely Senegal and Ghana (debt to revenue threshold), Tanzania, Mozambique, Mali, Madagascar and Rwanda considering the debt to export threshold.

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<sup>2</sup> Refer to table A2 in appendix-A for list of sustainable and unsustainable countries.

**Table 1: Post completion-point Countries Debt Ratios.**

| Country        | Month of Completion point | Debt Ratios  | Decision point | Completion point | Current Estimates. (2003) |
|----------------|---------------------------|--------------|----------------|------------------|---------------------------|
| Uganda         | May-00                    | Debt/ Export | 240            | 171              | 258                       |
| Bolivia        | Jun-01                    | Debt/ Export | 217            | 117              | 176                       |
| Tanzania       | Nov-01                    | Debt/ Export | 324            | 105              | 140                       |
| Burkina Faso   | Apr-02                    | Debt/ Export | 279            | 150              | 199                       |
| Mauritania     | Jun-02                    | Debt/Revenue | 500            | 201              | 256                       |
| Benin          | Mar-03                    | Debt/ Export | 240            | 155              | 196                       |
| Niger          | Apr-04                    | Debt/ Export | 322            | 150              | 182                       |
| Nicaragua      | Jan-04                    | Debt/ Export | 540            | 138              | 164                       |
| Guyana         | Dec-03                    | Debt/Revenue | 543            | 206              | 243                       |
| Mozambique     | Sep-01                    | Debt/ Export | 200            | 113              | 130                       |
| Ethiopia       | Apr-04                    | Debt/ Export | 284            | 150              | 158                       |
| Mali           | Mar-03                    | Debt/ Export | 217            | 134              | 134                       |
| Senegal        | Apr-04                    | Debt/Revenue | 305            | 156              | 154                       |
| Honduras       | Apr-05                    | Debt/Revenue | 304            | 188              | 188                       |
| Madagascar     | Oct-04                    | Debt/ Export | 248            | 137              | 137                       |
| Zambia         | Mar-05                    | Debt/ Export | 401            | 174              | 174                       |
| Rwanda         | Mar-05                    | Debt/ Export | 523            | 150              | 150                       |
| Ghana          | Jul-04                    | Debt/Revenue | 570            | 152              | 152                       |
| Simple Average |                           | Debt/ Export | 310            | 142              | 174                       |
| Simple Average |                           | Debt/Revenue | 445            | 181              | 218                       |

*Source: World Bank Independent Evaluation Group Report (2006) based Decision point and completion point documents; World Bank and IMF 2004.*

From this it is clear that the HIPC initiative's objective of bringing the countries' debt down to sustainable levels has not always been successful. The argument is that debt relief could initially reduce a country's stock of debt down to sustainable levels, however as a country continues to borrow, debt will continue to rise. This then implies that export earnings should increase to provide foreign exchange which will keep the debt ratios within sustainability boundaries. Hence a country's repayment capacity is crucial for it to attain sustainability and for the HIPCs it can be enhanced through enhancement of their export sector.

In addition, an evaluation update of the HIPC Initiative in a World Bank Report (2006) indicates that debt reduction is not sufficient for debt sustainability. Also a number of studies among which include Geithner (2002) and Sun (2004) (Refer to Chapter II section 2.1) that review the performance of the HIPC Initiative acknowledge that debt relief alone will not guarantee that a country will permanently exit from rescheduling and will not fall back into unsustainable levels of debt.

However they do not provide much guidance on the past trends of nature of the relationship between debt sustainability with debt reduction, composition of new borrowings and export performance indicators. It is pertinent that this relationship is clearly established in order to eliminate the debt problem in these countries.

### **1.3 Research Objective and Questions**

The main objective of this paper is to investigate the relative importance of debt management schemes and export performance in determining debt sustainability in the HIPCs of SSA. We note that the HIPC initiative mainly focuses on the factors relating with debt management.

The guiding questions that will help us achieve this objective are;

- i. What marks the difference between those post completion point countries that achieved sustainability and those that did not?
- ii. What is the effect of the factors relating to debt management relative to export performance on the debt to export ratio?

### **1.4 Research Methodology**

As indicated above, indebtedness is in general classified as the ratio of present value of debt to gross national income (GNI), or to exports plus remittances. Debt is measured in relation to GNI because it is the broadest measure of income generation in an economy and in relation to exports plus workers remittances because it provides the country with foreign exchange to service debt (WB Statistical Manual 2006). We shall mainly focus on the ratio of debt to exports as a measure for sustainability, since exports do provide the basis for external debt repayments. This ratio indicates a country's ability to make payments in foreign exchange earnings obtained from the exports. In table 1 above, for 14 out of the 18 HIPCs, sustainability is measured using the debt to export ratio which shows that this measure is also broadly used.

Although all indicators based on the stock of debt suffer certain drawbacks since the interest burden of servicing debt can vary widely depending on whether the debt is concessional or not, in this paper the variance in interest burden of servicing debt will be catered for by using an average interest rate on loans in the regression analysis.

Using secondary data from World Bank data sources and a basic balance of payments identity, we shall identify the trend in the HIPCs of some of the factors that determine debt sustainability, distinguishing between post-completion sustainable and unsustainable countries. The factors shall be divided into those that affect debt management (that is the numerator of the debt to export ratio) and the export performance of the HIPCs. Some of the factors that are related to debt management are interest payments and type of loan disbursements. This will give an indication of one of the reasons that explain why some post completion point countries are sustainable and some are not.

Basing on theoretical suggestion that there is a linear relationship between export growth and debt stock, this paper will also check for non- linearity in the relationship between export growth and debt stock. For countries with very low levels of export for instance, non-linearity implies that export growth would lead to a reduction of the debt to export ratio only after reaching a certain threshold of exports.

Finally this paper will run a regression analysis with debt management and export performance related factors as the independent variables and the debt to export ratio as the dependent variable. This will help us identify the relative effect of these factors on debt sustainability.

### **1.5 Scope and Limitation of study**

This paper mainly focuses on the effect of debt management and export performance on debt sustainability. However there are other factors like Foreign Direct Investment (FDI) that would affect debt sustainability that we shall not address. One of the reasons is because these factors are insignificant for HIPCs in SSA, hence conclusions will be made without considering these factors. The paper will concentrate on the HIPCs in SSA that have reached their completion points to a large extent with the aim of determining the difference in their sustainability status. However, the study will not capture the before and after effects of the HIPC initiative on the post completion point countries. This is because there are some countries that are still going through the HIPC process and in addition different countries have different decision and completion point dates which makes the process of capturing the country specific effects complex. Despite the limitations, this study will be able to give a useful indication of the factors that are more likely to ensure that HIPCs in SSA embark on a sustainable path in the long run.

## **1.6 Organization of the paper**

The paper is organized as follows:

Chapter II deals with the theoretical perspective, evidence and conceptual framework on debt sustainability.

Chapter III handles the debt management related factors.

Chapter IV will look at the export performance in the HIPC's.

Chapter V looks at the combined effect of export performance and debt management on debt sustainability by use of a regression analysis.

The summary, conclusions and policy implications will be presented in chapter VI.



## **Chapter II: Theory, Evidence and Conceptual Framework**

In this chapter we shall review literature by several authors on the performance of the HIPC initiative and the basic theory of debt sustainability. The theory provides an economic basis for the HIPC initiative's remedy for the debt burden in HIPCs. We should note that although a high debt service might reduce resources available for public expenditure, the reverse can also be true in the sense that an increase in public expenditure might reduce resources available for debt service and lead to increase in borrowings leading to unsustainable debt. The next session will comprise of a conceptual framework defining basic dynamics for debt sustainability. This framework will show two components of debt sustainability, the real side of the economy that requires export promotion policies and management of imports and debt management side which requires a reduction of the average interest rate on all loans. Debt management includes the negotiation of debt reduction such as provision of debt relief as in the HIPC initiative and borrowing on concessional terms.

### **2.1 Literature review on performance of the HIPC initiative**

A number of studies have indicated that the HIPC Initiative has fallen short of its main objective which is to reduce debt to a sustainable position. Below we review three papers in this regard.

Geithner and Nankani (2002) analyzed 24 heavily indebted poor countries that had reached their decision points under the HIPC initiative as of January 2002. The study is based on the available information on economic performance of these countries at the decision point and the updated positions. It compares the decision point and updated projections for all the HIPCs on exports and growth, new external borrowings, export price index and the terms of trade. For the updated debt sustainability outlook, it distinguishes between interim period countries (countries that are still in HIPC process) and post completion countries. It was found that the external debt sustainability outlook for most of the 20 countries in the interim period had worsened primarily because of lower exports. They reported that debt relief alone while critical in removing debt overhang cannot guarantee that a country will permanently exit from rescheduling and will not fall back into unsustainable levels of debt no matter how generous.

A clear understanding is needed of the role of debt relief and its flexibility and limitations within the HIPC framework in order to address the concerns whether the E-HIPC initiative will enable HIPCs to exit permanently from rescheduling. There are also other critical measures required to help achieve long term debt sustainability like the growth of exports, improved access for their exports to world markets and the volume and terms of the new borrowings. This implies that given the HIPCs' limited repayment capacity, the new borrowings will have to be on highly concessional terms in the form of grants.

Sun (2004) examines policy and institutional frameworks, debt management capacity, export diversification and fiscal revenue collection in completion point countries to assess their outlook on debt sustainability. He looks at indicators in these areas in the completion point countries and compares them with those in other low income countries and international standards. He finds out that completion point countries enjoy better policy and institutional frameworks and stronger debt management capacity although the standards are lower than world average levels. Also completion point countries export bases on average are no more diversified than those in other HIPCs and on the fiscal side they lag behind in revenue mobilization. He summarises that completion point countries will continue to face a dilemma given their large priority financing needs for development purposes on the one hand and the need to maintain long term debt sustainability on the other. Achieving and maintaining debt sustainability will require continued structural reforms, timely donor support and close monitoring of new borrowing in support of sound macroeconomic policies that will create an environment conducive to attracting foreign direct investment and diversifying exports. However, the mix between debt and grant financing must be closely monitored by both borrowers and creditors to ensure that the potentially large financing needs associated with the Millennium Development Goals do not give rise to a renewed excessive debt build up.

Abrego and Ross (2001) are of the view that by substantially reducing HIPCs' debt stocks and debt service payments, the initiative provides a 'solid' basis for debt sustainability and room for increased social spending. They come to this conclusion by looking at the data on evolution of debt and of various debt reduction mechanisms. This decision is based on the fact that for the HIPCs the level of debt had declined from US\$190 billion in 1995, to US\$170 billion in 1999 and that debt relief had increased through additional resources by the multilateral creditors.



They also look at debt service payments trend and social spending and they find a reduction in the former and an increase in the latter. However these trends range from 1999 onwards. We do not see the levels of debt in the 2000s. Also debt service payments can reduce due to contraction of more concessional debt and not as a result of debt reduction. An increase in social spending is not entirely as a result of HIPC debt relief, other resource inflows that are higher than debt relief and are meant to reduce poverty impact on social spending. The decrease in debt even as given was not substantial reduction given that it was still triple the amount in 1980. Abrego and Ross contradict themselves by saying that the level of relief provided under the HIPC initiative should be sufficient for these countries to embark on a path of sustainable debt and then say that HIPC relief is a one time step reduction and not an ongoing guarantee for debt sustainability. They also say that for poverty reduction, HIPC relief is important but broader international support is needed.

An apparent criticism of their paper is that the primary reason why the HIPC relief was established was to reduce debt to sustainable levels and not to reduce poverty. Hence in the debt sustainability context poverty reduction is not a critical issue. Evidence (Table 1) has also shown that post-completion point<sup>3</sup> debt ratios are deteriorating hence the claim that debt relief provides a 'solid' basis for debt sustainability is not valid, if it were we would see an improvement in the debt ratios for the completion point countries. Next we look at the theoretical perspective of debt sustainability.

## **2.2 Theoretical perspective of debt sustainability.**

The issue of debt capacity can be addressed through non-optimising models where the sustainability of debt and the expected future growth path of the economy are examined (See Hjertholm 2001). The 'growth-cum-debt' literature emphasises foreign borrowing for investment purposes, i.e. for filling the gap between domestic investment and savings (Avramovic *et al.* 1964 and King 1968). The basic argument in these models is that a country will maintain its capacity to service debt provided additions to its debt overtime contributes sufficiently to growth. A condition normally used to depict the debt-growth process states that to maintain debt service capacity over time, the growth rate of output should equal or exceed the rate of interest on loans. This condition is expressed in the context of the Harrod-Domar growth model (See Hjertholm 2001).

This can be used as the context through which the HIPC initiative operates where debt relief is used to augment public expenditure and an assumption of inflow of highly concessional loans and grants is made in order to reduce the cost of borrowing.

The merit of the growth-cum-debt model is that it simplifies the debt and growth mechanics to the fact that a borrowing strategy will only work if there is sufficient growth. In the long-term, the accumulation of foreign debt has to be matched by progress in economic growth. However, in terms of a country's debt capacity the growth-cum-debt framework suffers from a number of conceptual problems relating to its theoretical underpinnings and the rigidity of its basic assumptions (McDonald 1982). One of the set backs is that it focuses solely on the savings-investment gap, yet external financing must be repaid in foreign currency. The performance of the external sector of the borrower's economy is not considered. Another set back is that the time path of the growth of output is inherently difficult to predict with the required operational precision. From this one can easily understand why the fiscal and debt management policies of many developing countries in the 1970s and early 1980s seemed so misguided. The fact is that the theoretical literature has had little direction to offer in terms of operational guidance for the design of public borrowing policies (Hjertholm 2001).

Since a country's debts have to be serviced in foreign exchange the value of exports gives a more accurate impression of income than say GDP since it relates more directly to debt servicing ability. If for example there is an increase in the production of non tradables, there would be an increase in GDP which does not necessarily reflect a country's ability to service debt. Accordingly, the key feature of the debt dynamics approach is the relationship between export performance and the cost of borrowing. The solvency condition that emerges is that for the borrower to maintain debt service capacity, the rate of growth of exports must equal or exceed the rate of interest on the borrowed funds. However we note that this framework assumes a time invariant growth path of exports and rate of interest. In reality, both variables will follow complicated time paths, and the assumption is most unlikely given the experience of most low-income borrowers. Moreover imports are not explicitly considered in this calculation, which tends to undermine the assumptions considered for sustainability. However this framework provides an important condition for maintaining the debt service capacity.

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<sup>3</sup> Completion and post completion point refer to the same set of countries

In the long run debt has to be matched by progress in economic growth or growth of exports to the extent that surplus domestic resources become available for servicing interest payments, and ultimately for repaying the principal of the debt. The next section deals with the concept framework of debt sustainability.

### 2.3 Conceptual framework for basic debt dynamics

In general an economy borrowing from abroad is placing a burden on its future foreign exchange income because of the related factor payments and amortization obligations. Hence the foreign liabilities, investment returns and exchange rates will determine claims of lenders on an economy's future commodity flows that represent the future income streams. For each economy the internal balance must then match the external balance according to the standard national accounting concept. The external balance is the current account balance of payment which is the trade balance plus net factor payments plus net current transfers to the rest of the world. The internal balance is the savings and investments gap.

Such that

$$I - S = M - Ex - Tr - Y \quad (1)$$

Where  $(I - S)$  is the resource gap of the economy,  $(M - Ex)$  is the trade balance,  $Tr$  is the net transfer from abroad and  $Y$  is the net factor income from abroad (Abdessater and Thakur 1997).

The resource gap can be financed by foreign direct investment from abroad ( $FDI$ ), net borrowing from abroad ( $NB$ ) and private sector borrowing from the banking system. A country can also finance a deficit by depleting its reserves hence avoiding external borrowing. In this case we shall assume no change in official reserves and that  $FDI$ ,  $Y$  and private capital flows are insignificant for the HIPC's. Such that the borrowing requirement  $NB$  derived from equation 1 is given as below.

$$NB = M - Ex - Tr \quad (2)$$

In addition when a country borrows from abroad it has to service its debt by paying interest on the debt and by paying back the principal (amortization) over an agreed time period.

The interest component is found in the current account and the amortization is recorded in the capital account. Hence if we consider the interest payments on debt ( $iD$ ) in the current account, the borrowing requirement from equation 2 becomes

$$NB = M - Ex - Tr + iD \quad (3)$$

We shall assume that the net transfers from abroad  $Tr$  are mainly official grants<sup>4</sup>. The debt at a given time  $t$  is given as;

$$D_t = D_{t-1} + NB_t - AM_t \quad (4)$$

Where

$D_t$  denotes the debt in the end of a given period

$D_{t-1}$  denotes the debt in previous period

$NB_t$  denotes New borrowings in time period  $t$

$AM_t$  denotes Amortization of debt during the time period  $t$

Substituting equation 3 in 4, we get a change in debt stock,

$$D_t - D_{t-1} = M_t - Ex_t - Tr_t + iD_{t-1} - AM_t \quad (5)$$

Let  $D_t - D_{t-1} = \ddot{D}$  which is change in debt over time. From equation 4 we see that change in debt over time is equivalent to the borrowing requirement less amortization. Since amortization is always a fixed amount which is agreed upon in the initial stages of a loan contract, it is not considered as a policy variable subject to policy proposals. Hence when we exempt amortization equation 5 becomes;

$$\ddot{D} = M - Ex - Tr + iD_{t-1} \quad (6)$$

If we divide through by exports we get the ratio of debt to exports on the left hand side that represents long run sustainability condition  $\frac{\ddot{D}}{Ex}$ . That is;

$$\frac{\ddot{D}}{Ex} = \frac{M - Ex}{Ex} - \frac{Tr}{Ex} + \frac{iD_{t-1}}{Ex} \quad (7)$$

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<sup>4</sup> In this paper grants and official transfers are used interchangeably

We know that current exports are given by the sum of previous exports plus their growth such that  $Ex_t = (1 + g_x)Ex_{t-1}$ . Substituting this in the last term on the right hand side of equation (7) we get

$$\frac{\ddot{D}}{Ex} = \frac{(M - Ex)}{Ex} - \frac{Tr}{Ex} + \frac{i}{(1 + g_x)} \cdot \frac{D_{t-1}}{Ex_{t-1}} \quad (8)$$

From equation 8 above we see that a reduction in trade deficit (i.e. increase in exports and a reduction in imports) will reduce the debt to export ratio in the long run. An increase in official grants as well as a reduction in interest payments will also reduce this ratio. We also see that the grants received should also exceed or cover the current account deficit in order to maintain sustainable levels. Also the growth rate of the exports should be equal or exceed the interest rate on loans for sustainability to occur. It follows that for a program to reduce the debt burden in these countries all these factors have to be taken into account. Please note that the HIPC initiative aims at reducing the ratio of previous debt to exports as shown on the right hand side which is only one aspect of the debt dynamics. Moreover if sustainability requires permanent exit from rescheduling, then reducing the debt stock is not the ultimate source for sustainability.

Equation 8 above shows basically two components. The first term on the right hand side refers to the real side of the economy and involves policies related to export growth and managing imports while the second and third terms refer to debt management and require the average interest rates of all loans to go down. This can be achieved by debt reduction and borrowing at highly concessional terms. In the next chapter we shall deal with the debt dynamics mainly concerned with debt management.



## Chapter III: Disbursements, Interest Payments and Debt Sustainability

According to the conceptual framework discussed in chapter II, in order to maintain debt sustainability and to reduce the debt to exports ratio in the long run the interest payments on debt need to reduce. Factors that can lead to a reduction in interest payments are the nature of disbursements of loans in these countries, receipt of grants where by an increase in grants inflows instead of loans should reduce payments on debt, and accumulation of interest arrears where by interest payments reduce due to the fact that some payments are not being made. This chapter will review the trend in these factors and will look at the status overall debt stock that should reflect whether provision of debt relief by the HIPC initiative is sufficient to reduce debt in the HIPCs. We note that these are some of the aspects considered for debt management in the HIPCs. We shall find out whether the sustainable completion point countries have managed their debt differently from the other HIPCs in SSA, especially those post completion point HIPCs that are not sustainable.

### 3.1 Official Transfers, Disbursements of loans and Interest Payments

**Table 2: Grants<sup>5</sup> and current account deficit in million US\$ for HIPCs in SSA**

| Years                       | 1996   | 1997   | 1998   | 1999   | 2000   | 2001   | 2002   |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|
| Grants (official transfers) | 2,934  | 2,857  | 3,034  | 2,510  | 2,681  | 2,784  | 2,587  |
| % of complete points        | 84     | 86     | 85     | 83     | 85     | 87     | 80     |
| Completion Point            | 2,465  | 2,449  | 2,590  | 2,093  | 2,274  | 2,421  | 2,082  |
| <i>Sustainable</i>          | 1,389  | 1,477  | 1,512  | 1,390  | 1,544  | 1,588  | 1,177  |
| <i>Non-sustainable</i>      | 1,076  | 972    | 1,078  | 703    | 730    | 833    | 905    |
| Other HIPCs                 | 468    | 407    | 444    | 417    | 407    | 364    | 506    |
| Current Account             | -7,107 | -7,465 | -8,635 | -8,671 | -6,874 | -7,630 | -7,457 |
| Completion Point            | -3,645 | -4,755 | -5,115 | -6,101 | -5,054 | -4,852 | -4,600 |
| <i>Sustainable</i>          | -2,539 | -3,187 | -3,323 | -4,089 | -3,171 | -2,848 | -2,514 |
| <i>Non-sustainable</i>      | -1,106 | -1,568 | -1,793 | -2,012 | -1,883 | -2,003 | -2,086 |
| Other HIPCs                 | -3,462 | -2,710 | -3,520 | -2,570 | -1,820 | -2,778 | -2,857 |

Source: World Bank African development indicators 2004 and own computation

Table 2 above shows that the sustainable completion point countries receive more grants than the other HIPCs in general. The completion point countries receive 83% of the grants on average, with the sustainable countries receiving a considerably higher amount of grants than the unsustainable countries.

However, contrary to what the HIPC Initiative might assume the grants are not particularly increasing in the HIPCs.

We see that the grants in 2002 at 2,587 million US\$ are lower than the receipt in 1996 that was 2,934 million US\$. Moreover although the completion point countries have more grants, this does not guarantee sustainability since some of these countries are not sustainable. We also see that the total number of grants received is less than the current account deficit, for all the HIPC. Hence the grants are not sufficient to cover the current account deficit of both the sustainable and non sustainable countries. The higher receipt of grants for sustainable countries is not sufficient to be used as an explanation of the difference in status of the completion point countries since their current account deficits are higher than the grants for both sets of countries. In table 3 below, we shall see the structure of loan disbursements to the HIPC.

**Table 3: Structure of long term disbursements<sup>6</sup> in million US\$ for HIPC in SSA.**

| Years                  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  |
|------------------------|-------|-------|-------|-------|-------|-------|-------|
| Disbursements          | 4,940 | 4,131 | 3,395 | 3,076 | 2,964 | 3,561 | 3,866 |
| % of Concessional      | 73.14 | 80.65 | 84.73 | 86.75 | 92.26 | 86.25 | 96.23 |
| Concessional           | 3,613 | 3,332 | 2,877 | 2,668 | 2,735 | 3,071 | 3,721 |
| Completion Point       | 2,375 | 2,357 | 1,928 | 1,946 | 1,982 | 2,498 | 2,591 |
| <i>Sustainable</i>     | 1,375 | 1,499 | 1,307 | 1,089 | 1,045 | 1,106 | 1,258 |
| <i>Non-sustainable</i> | 1,000 | 859   | 622   | 857   | 937   | 1,392 | 1,333 |
| Other HIPC             | 1,238 | 975   | 949   | 722   | 753   | 574   | 1,130 |
| Non-Concessional       | 425   | 397   | 249   | 169   | 125   | 153   | 109   |
| Completion Point       | 266   | 267   | 101   | 64    | 76    | 106   | 90    |
| <i>Sustainable</i>     | 161   | 170   | 62    | 25    | 49    | 69    | 54    |
| <i>Non-sustainable</i> | 104   | 98    | 40    | 39    | 26    | 38    | 36    |
| Other HIPC             | 159   | 129   | 148   | 105   | 49    | 47    | 19    |
| Private                | 902   | 403   | 269   | 239   | 105   | 337   | 37    |
| Completion Point       | 449   | 316   | 196   | 126   | 63    | 335   | 37    |
| <i>Sustainable</i>     | 390   | 236   | 166   | 75    | 52    | 271   | 33    |
| <i>Non-sustainable</i> | 59    | 80    | 30    | 51    | 12    | 64    | 4     |
| Other HIPC             | 453   | 87    | 73    | 113   | 42    | 2     | 0     |

Source: Africa Development Indicators 2004 and own computation; figures exclude IMF and short term debt

Table 3 above shows the total long term disbursements of loans to the HIPC in SSA from 1996 to 2002. We see that the disbursements gradually decreased from 4,940 million US\$ in 1996 to 2,964 million US\$ in 2000 and then increased to 3,866 million US\$ in 2002. We see that the long term concessional<sup>7</sup> debt dominates the long term disbursements to the HIPC. In 2002 for instance they contributed 96% of the total long term disbursements on loans.

<sup>5</sup> Grants solely used for the purpose of servicing the Balance of Payments.

<sup>6</sup> These figures exclude IMF and short term loan disbursements

<sup>7</sup> Concessional debt is defined as loans with an original grant element of 25 percent or more.



The increase in disbursements from 2000 can be attributed to an increase in concessional loans that increased from 2,735 million US\$ in 2000 to 3,721 million US\$ in 2002. And on average two thirds of these flows are to the completion point countries. Concessional loans were high in 1996 and 1997, in 1998 and 1999 there was a decline and they started increasing from 2000 onwards. There was a decline of the non concessional and private loans over the period 1996 to 2002.

Although the goal of highly concessional debt has been met some countries that have already completed the HIPC process are still not sustainable. This is not surprising since the receipt of concessional debt does not mean that there will not be interest payments. The receipt of concessional debt on its own still does not address the need for countries to service their debt without seeking external support. Hence for HIPCs once the debt stock has been cut to sustainable levels, contracting concessional debt will not guarantee that these countries will be able to pay back their debt obligations.

When we look at the loan disbursements of the completion point countries, those that are non sustainable received more concessional debt in 2001 and 2002 as compared to those that are sustainable that is 1,392 and 1,333 million US\$ respectively for the non sustainable countries and 1,106 and 1,258 million US\$ respectively for the sustainable. In the same years the sustainable HIPC post completion point countries received more non concessional and private debt compared to the non sustainable. Given that in general there is a decrease in disbursements from 1996 to 2000 and then an increase there after it is unlikely that we will have a steady decrease in the interest payments unless the loans received from 2000 onwards are on more concessional terms than those received in the previous period.

Table 4 below shows that for the HIPCs in SSA, interest payments have declined from 1,967 million US\$ in 1996 to 1,136 million US\$ in 2003. In percentages of the previous year debt stocks the interest payments have reduced from 1.37% to 0.88% respectively although we see a slight increase in payments from 1997 to 1998 and from 2001 to 2002. For the sustainable countries we see a decrease in the percentage of interest payments on previous debt from 1.59% in 1996 to 0.93% in 2003 where as for the non sustainable countries we see an increase from 1% in 1996 to 1.16% in 2003.

However we note that for the other HIPCs as well the interest payments as a percentage of previous debt have reduced from 1.4% in 1996 to 0.77% in 2003. Hence the decrease in interest payments is not limited only to the sustainable countries.

Moreover there is not much logic in assuming that the debt contracted by the non sustainable completion point countries must be on less concessional terms than that contracted by the sustainable countries. Table 3 above shows that the non sustainable HIPC countries received more concessional loans than the sustainable countries and other HIPCs in 2001 and 2002; this partly could explain the increase in interest payments of the non sustainable completion point countries. The fact that the interest payments for the non sustainable countries have increased even when they have received more concessional loans than the sustainable countries shows that receipt of concessional loans will still give rise to need for re-payment of interest in the future, sustainability will not depend on receipt of concessional loans.

**Table 4: Interest payments (million US\$) for HIPCs in SSA.**

| Years   | 1996        | 1997        | 1998        | 1999        | 2000        | 2001        | 2002        | 2003        |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Interest Payments                                       | 1,967       | 1,742       | 1,934       | 1,855       | 1,685       | 1,052       | 1,391       | 1,136       |
| Payments as % of previous debt                          | 1.37        | 1.22        | 1.42        | 1.31        | 1.28        | 0.83        | 1.14        | 0.88        |
| Completion point  | 801         | 757         | 793         | 783         | 649         | 484         | 533         | 582         |
| <i>Sustainable</i>                                      | <i>525</i>  | <i>483</i>  | <i>541</i>  | <i>508</i>  | <i>404</i>  | <i>289</i>  | <i>299</i>  | <i>302</i>  |
| <i>Sustainable payments as % of previous debt</i>       | <i>1.59</i> | <i>1.45</i> | <i>1.62</i> | <i>1.42</i> | <i>1.15</i> | <i>0.86</i> | <i>0.99</i> | <i>0.93</i> |
| <i>Non Sustainable</i>                                  | <i>277</i>  | <i>275</i>  | <i>253</i>  | <i>275</i>  | <i>245</i>  | <i>195</i>  | <i>234</i>  | <i>279</i>  |
| <i>Non Sustainable payments as a % of previous debt</i> | <i>1.00</i> | <i>0.99</i> | <i>0.92</i> | <i>0.97</i> | <i>1.09</i> | <i>0.89</i> | <i>1.05</i> | <i>1.16</i> |
| Other HIPCs   | 1,166       | 984         | 1,140       | 1,072       | 1,036       | 568         | 857         | 554         |
| Other HIPCs payments as % of previous debt              | 1.40        | 1.20        | 1.49        | 1.36        | 1.39        | 0.79        | 1.23        | 0.77        |

Source: World Bank Global Development Finance 2005 and own computation

The fact that interest payments of the other HIPCs too has decreased implies that a reduction in interest payments might be driven by some other factor other than a reduction in new borrowings. It is possible that these countries are accumulating interest arrears instead of paying on time. One more factor that we shall consider that can influence the trend of interest payments is the trend in accumulation of interest arrears.

**Table 5: Interest Arrears<sup>8</sup> in millions of US\$ for HIPCs in SSA.**

| Years  | 1996         | 1997         | 1998         | 1999         | 2000         | 2001        | 2002        | 2003         |
|--|--------------|--------------|--------------|--------------|--------------|-------------|-------------|--------------|
| Interest Arrears                                     | 14,565       | 12,616       | 13,501       | 12,708       | 13,068       | 13,179      | 11,029      | 12,510       |
| Arrears as % of previous debt                        | 10.14        | 8.81         | 9.83         | 8.91         | 9.87         | 10.35       | 9.06        | 9.77         |
| Completion point                                     | 2,440        | 2,014        | 2,180        | 1,597        | 1,664        | 1,237       | 1,271       | 1,436        |
| <i>Sustainable</i>                                   | <i>1,635</i> | <i>1,151</i> | <i>1,242</i> | <i>1,252</i> | <i>1,331</i> | <i>955</i>  | <i>983</i>  | <i>1,146</i> |
| <i>Sustainable arrears as % of previous debt</i>     | <i>4.96</i>  | <i>3.45</i>  | <i>3.73</i>  | <i>3.50</i>  | <i>3.78</i>  | <i>2.86</i> | <i>3.27</i> | <i>3.54</i>  |
| <i>Non Sustainable</i>                               | <i>805</i>   | <i>863</i>   | <i>938</i>   | <i>345</i>   | <i>333</i>   | <i>283</i>  | <i>288</i>  | <i>290</i>   |
| <i>Non Sustainable arrears as % of previous debt</i> | <i>2.90</i>  | <i>3.11</i>  | <i>3.39</i>  | <i>1.22</i>  | <i>1.49</i>  | <i>1.29</i> | <i>1.30</i> | <i>1.21</i>  |
| Other HIPCs  | 12,125       | 10,603       | 11,321       | 11,112       | 11,404       | 11,942      | 9,758       | 11,074       |
| Other HIPCs arrears as % of previous debt            | 14.61        | 12.91        | 14.83        | 14.15        | 15.25        | 16.58       | 14.05       | 15.44        |

Source: Own computation from World Bank Global Development Finance 2005

In table 5 we see that the non sustainable completion point countries have the lowest accumulation of interest arrears as a percentage of the debt of previous period with an average of 2% over the given period while the sustainable countries average percentage of arrears accumulation is 4%. In 2003 the percentage of interest arrears was only 1.21% for the non sustainable countries, where as that of the sustainable completion point countries was 3.54% in 2003. We also see that as anticipated the other HIPCs have the highest accumulation of interest arrears which is 15% on average and we see an increase in interest arrears from 2002 to 2003. We also see an increase in accumulation of arrears of the sustainable countries from 2.86% (955 million US\$) in 2001 to 3.54% (1,146million US\$) in 2003 where as over the same period we see a decline in the accumulation of interest arrears for the non sustainable countries from 1.29% (283 million US\$) to 1.21% (290 million US\$). This explains why the interest payments for the non sustainable countries increased from 2002 to 2003 while that of the other HIPCs and the sustainable countries decreased.

According to this table the non sustainable completion point HIPCs have accumulated fewer arrears than the sustainable countries which is contrary to our expectations. This is because by definition sustainability involves less accumulation of arrears hence it is the sustainable countries that should have a lower percentage of arrear accumulation and not the non sustainable countries.

<sup>8</sup> Table of the principal arrears found in appendix-B, Table B2.

However since the accumulation of arrears is lower in the completion point countries we see that the countries are trying to meet a large sum of their debt obligations on time as compared to the other HIPC.

The movement or trend of interest payments and arrears from 1996 to 2003 does not give a logical explanation as to why some completion point countries are sustainable and others are not. This then implies that debt sustainability for the HIPCs in SSA may be more of an export performance problem (denominator of ratio of debt to export or refer to equation 7 chapter II) than of a debt management problem. We note that total arrears contribute to the calculation of the overall stock of debt. We shall see the overall debt stock for the HIPCs in the next section.

### 3.2 Total External Debt Stock

From the above discussion we see that debt has been accumulating in the HIPCs, due to increased borrowings. The accumulation of principal arrears (Table B2; Appendix-B) also contributes to debt accumulation although in this case the accumulation of debt is mainly due to new borrowings. This implies that unless the debt stock reduction or debt relief out strips the new borrowings we will not have a reduction in debt stock over time.

**Table 6: Total External Debt in million US\$ for HIPCs in SSA.**

| Years                  | 1996          | 1997          | 1998          | 1999          | 2000          | 2001          | 2002          | 2003          |
|------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Debt HIPCS             | 143,169       | 137,305       | 142,658       | 132,419       | 127,378       | 121,744       | 128,111       | 137,736       |
| Completion point       | 61,046        | 60,946        | 64,119        | 57,644        | 55,348        | 52,305        | 56,372        | 60,727        |
| <i>Sustainable</i>     | <i>33,320</i> | <i>33,308</i> | <i>35,789</i> | <i>35,226</i> | <i>33,416</i> | <i>30,094</i> | <i>32,355</i> | <i>34,450</i> |
| <i>Non Sustainable</i> | <i>27,726</i> | <i>27,638</i> | <i>28,330</i> | <i>22,418</i> | <i>21,932</i> | <i>22,211</i> | <i>24,017</i> | <i>26,278</i> |
| Other HIPCS            | 82,123        | 76,359        | 78,539        | 74,776        | 72,029        | 69,439        | 71,739        | 77,009        |

*Source: Own computation from World Bank Global Development Finance 2006*

Table 6 above shows that for the completion point countries, debt increased from 52,305 million US\$ in 2001 to 60,727 million US\$ in 2003.

This increase in debt is reflected for both the sustainable and non sustainable completion point countries.

We should note that for the HIPCs outstanding debt should be decreasing due to the HIPC debt relief initiative.

Especially for those that have completed the HIPC initiative process. But there is no difference between the post completion point HIPCs and the other HIPCs in this respect. Moreover even in the completion point HIPCs that are sustainable we see an increase in debt. This shows that debt relief has had insufficient impact on the reduction of debt in these countries.

### 3.3 Debt Reduction and debt sustainability

**Table 7: Debt Relief for the HIPCs in SSA in million of US\$**

| Years                       | 1996 | 1997  | 1998 | 1999  | 2000 | 2001  | 2002  | 2003  |
|-----------------------------|------|-------|------|-------|------|-------|-------|-------|
| Debt Relief                 | 620  | 4,619 | 551  | 5,010 | 930  | 3,537 | 4,114 | 2,286 |
| Completion point            | 506  | 564   | 257  | 4,952 | 802  | 2,872 | 1,392 | 1,590 |
| <i>Sustainable</i>          | 177  | 528   | 139  | 564   | 477  | 2,676 | 835   | 1,006 |
| <i>Non Sustainable</i>      | 328  | 35    | 119  | 4,387 | 325  | 195   | 557   | 584   |
| Other HIPCS                 | 114  | 4,056 | 294  | 59    | 128  | 666   | 2,722 | 696   |
| % of completion point       | 82   | 12    | 47   | 99    | 86   | 81    | 34    | 70    |
| Debt relief as % debt stock | 0.44 | 3.39  | 0.39 | 3.81  | 0.73 | 2.90  | 3.20  | 1.66  |

*Source: Own computation from World Bank Global Development Finance 2005*

We see a general increase in debt relief savings since 1996, although the increase in debt relief is not consistent from year to year. Apart from the years 1999 and 2002 where total debt relief was more than the disbursements, generally the disbursements in the HIPCs are more than the debt relief (Refer to table 3 for disbursements). Moreover debt relief on average is only 2% of the total debt stock in the HIPCs.

From above we have seen that the debt in the HIPCs is increasing instead of reducing and that the disbursement or new borrowings outstrips debt relief received on average. We have seen an increase in disbursements mainly consisting of concessional loans and that completion point countries receive more grants with the sustainable countries receiving higher grants than the non sustainable. However these grants are not sufficient to cover the current account deficit. In addition there is no reason to assume that the completion point sustainable HIPCs are sustainable because of either low interest payments or low debt because debt has not reduced and we have got accumulation of interest arrears that influence the interest payments.

In addition continual provision of debt relief and the underlying assumptions made by the HIPC initiative to increase grants to solve a debt problem encourages reliance on external aid especially if the funds saved are not used to promote productive sectors.

One of the factors that could inherently affect the performance of the export sector is the heavy reliance on foreign financing that could lead to an appreciation of the exchange rate through the Dutch-disease effect.

Studies by Adam, Bevan and Chambas (2001) and Nyoni (1998), suggest aid is associated more with depreciation than an appreciation of the exchange rate. However, this can be partly because governments consciously seek to avoid this effect, by deliberately depreciating their currencies. For this and other reasons, we regard the issue of whether a large reliance on aid would induce Dutch-disease problems as unresolved. Hence we should not assume that increase in aid to the HIPC's whether in form of grants or more concessional loans, would not induce this type of macroeconomic difficulty. Much would depend on how the aid is deployed and on its productivity (Ouattara and Strobl 2004).

This implies that even if the new MDRI that is offering 100% debt forgiveness for the completion point countries is in place, this does not guarantee that HIPC's will be sustainable in the long run for as long as they are contracting new loans and do not accumulate enough foreign exchange to pay their debt. This can be seen from the past experience of the traditional debt relief mechanisms and currently the HIPC initiative where provision of debt relief has been increased, but some countries remain unsustainable with the ratios deteriorating after reaching the completion point. The implication is that the export sector of the sustainable countries must be performing very well, and that of the non sustainable countries is not.

In the analysis so far we have not seen why some completion point countries are sustainable and others are not. The factors affecting the numerator of the debt to export ratio or that depict debt management in these countries have offered no clear reason why some countries are sustainable and others not even after completing the HIPC process. This implies that sustainability does not depend much on how much debt relief a country receives or how much the debt stock has reduced, nor how much concessional debt one receives but rather that a country is able to pay its debt obligations. Hence it is most likely that the sustainable countries have a better export sector performance than the non sustainable countries. We shall verify this in the next chapter.

## Chapter IV: Exports and Debt Sustainability

In this chapter we shall look at the export performance in SSA and make a comparison between the HIPCs and Non-HIPCs. We shall then determine whether there is a difference in export performance between the non sustainable and the sustainable HIPCs. There after we shall compare the trend of export performance of two post completion point countries Tanzania and Uganda where the former is sustainable and the latter non sustainable.

### 4.1 Export performance in Sub Saharan Africa.

Following most of Africa's independence in the 1960s, the 1970s and 80s were marked by stagnation and decline in economic growth, this record was so disastrous that in the 1980s it was described as 'Africa's Lost Decade'. This poor economic performance was also reflected in Sub Saharan Africa's share of world exports which dropped from 2.2% in 1980 to 1.0% in 1990 and to 0.8% in 2001 (Refer to Alemayehu 2006 and see table 8 below). The decline in exports was as a result of a combination of several factors like the structure of international trade; the composition of SSA trade; low productivity as a result of poor governance; poor trade and economic policies applied by SSA; poor infrastructure in SSA countries—which is related to the high cost of doing business in SSA; the substantial erosion of market share of SSA countries; market access constraints; and agricultural policies in developed countries (Manduna 2005). In addition the structure of African exports is characterized by dependence on primary commodities, which makes them vulnerable to global economic shocks. Such commodities are also characterized by low income elasticity of demand, volatility and a secular decline in prices. They also represent sectors where the scope of technical progress is limited (Alemayehu 2006; also see Alemayehu 2002).

**Table 8: Share of African exports in World exports**

| Regions                  | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 | 2001 |
|--------------------------|------|------|------|------|------|------|------|------|
| Developing Countries     | 22.9 | 27.5 | 30.1 | 25.1 | 19.7 | 19.9 | 23.0 | 23.5 |
| SSA/World exports        | 2.0  | 2.1  | 2.2  | 1.6  | 1.0  | 0.8  | 0.8  | 0.8  |
| SSA/Developing Countries | 8.6  | 7.4  | 7.4  | 6.2  | 5.2  | 3.8  | 3.6  | 3.5  |

*Source: Alemayehu 2006 based on World Bank (2003d)*

The orthodox perspective of the world trading system upholds that it should be a free trading system determined by natural comparative advantage which leads to mutual benefits for all. To this effect, the international trading bodies facilitate or emphasize trade liberalization and specialization. One of the problems of the international trade system is that developing countries do not have a strong bargaining position as a result of the nature of goods they produce and their narrow productive bases. Hence this system inherently disadvantages the African countries. When we see the past experience of developed countries and East Asian countries, export promotion and not free trade was practiced in these countries and this was a successful measure to enhance exports in these economies and consequently development. Currently the European Union still protects its industries through giving subsidies to their agricultural producers and non tariff barriers are numerous for the less developed countries that produce competing manufactures and agricultural exports (Shaw 2000). Yeats et al (1996) focused on the narrow question whether Africa's trade performance was a function of tariffs and non tariff barriers imposed by the Organisation of Economic Co-operation and Development (OECD) countries (the region's largest trading partner) or has it been caused by the domestic policies of the African countries themselves. It was found that the preferential treatment they got should rather have enhanced their competitiveness had they adopted policies that encouraged export led growth.

With regards to the condition of these countries and the push towards liberalization it is hard for governments to now adopt export led policies especially since these countries operate in a high risk environment with shocks and policy changes and reforms as demanded by the donors. Moreover some of these reforms were and are not sufficiently deep or extensive enough to make an impact on the gap between African countries and their competitors who place emphasis on export success. The HIPC initiative is one of the programs that do not put emphasis on export performance and yet the nature of the problem the initiative intends to solve requires the exports earnings in these countries to significantly increase. In 2002 an IMF-World Bank review of the HIPC initiative reportedly concluded that one of the main causes of deterioration of debt indicators for HIPC countries in 2001 was lower export earnings. Lower average exports accounted for over 50% of the deterioration of the HIPC debt service indicators and export prices declined by an average of 4.8% for HIPC countries which experienced a deterioration in debt indicators against only 1.1% for those which did not (IMF and IDA (2002) pp.24-7).



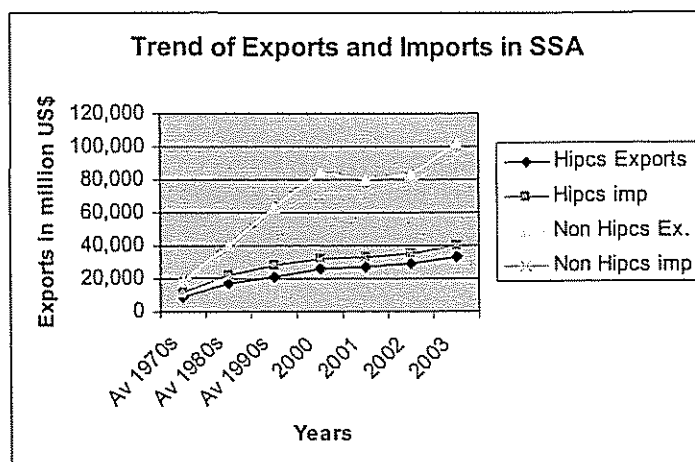
The lower exports for these countries reduced the basis for export projection shifting the level of projected exports downwards hence shifting upward the projected NPV of debt to exports ratios and worsening the medium term projections of these countries' debt sustainability. The failure to diversify away from traditional primary exports is one cause of such growth shortfalls.

#### **4.2 Comparison of Export performance for HIPCs and Non HIPCs in SSA.**

Exports and imports of the HIPC and the Non HIPC countries in sub-Saharan Africa have increased over the years from an annual average of about 27 billion US\$ in the 1970s to 57 billion US\$ in the 1980s and 85 billion US\$ in the 1990s. Since 2000 the exports earnings have been over 100 billion US dollars. (Refer to table C1 in appendix-C). Despite the increase in export earnings in Africa we see that the share of exports of SSA to the rest of the World has continued to decline as shown in table 8 above. Moreover on average the HIPCs contribute less than 30% of the total exports in Africa although they are double the number of the Non HIPC countries.

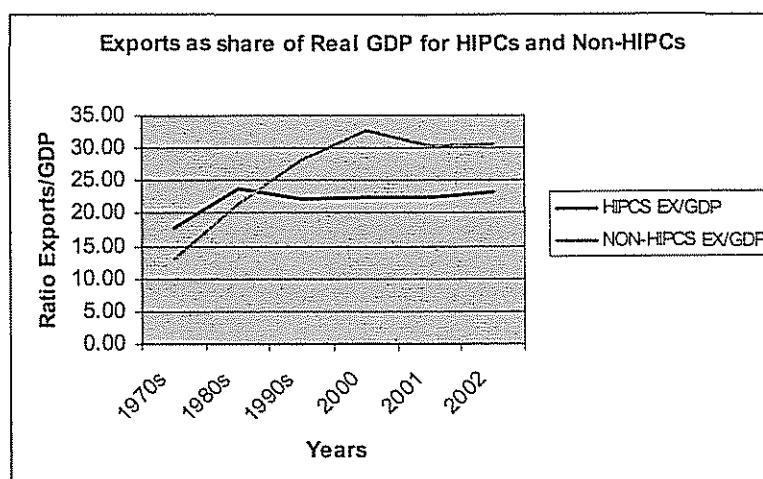
The HIPCs have a share of about 33% of the total imports to SSA. The imports are higher in HIPC countries as compared to their exports. This implies that the HIPC countries do in general have current account deficits as opposed to the Non HIPC countries whose export earnings are higher than the import earnings as shown in figure 1 below. In addition figure 2 shows that the HIPCs exports as a percentage of Real Gross Domestic Product (GDP) have remained on average constant at about 22% since the 1980s to 2002 while the Non HIPCs ratio of exports to GDP rose from an average of 22% in the 1980s to about 31% in the 2000s. This shows that the Non HIPCs export sector has improved over time as compared to the HIPCs export sector hence the need for enhancement of the export sector for the HIPCs in SSA.

**Figure 1: Trend of Trade in SSA**



Source: World Bank Development indicators 2005.

**Figure 2: Exports as a share of Real GDP for HIPCs and Non-HIPCs**



Source: Data from World Bank 2005 and African Development indicators 2004

We shall now look at the export performance within the HIPC countries to determine whether there is a difference between the sustainable and the non-sustainable HIPC countries.

### 4.3 Exports of sustainable and non-sustainable HIPC countries in SSA

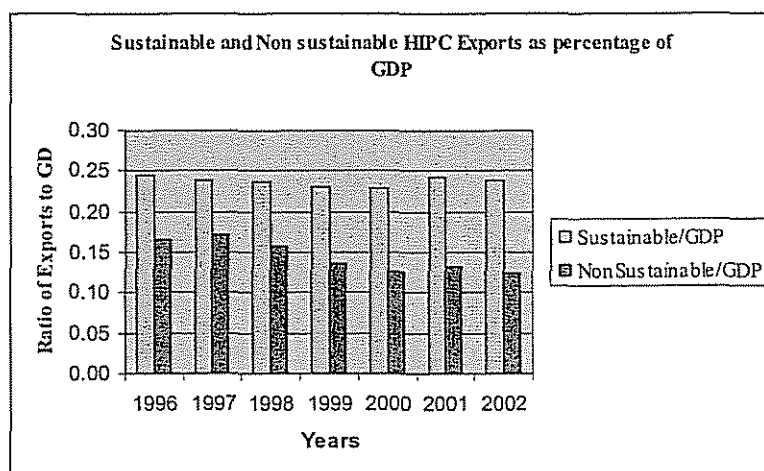
**Table 9: Export performance of the HIPC countries in SSA**

| Years                 | 1996   | 1997   | 1998   | 1999   | 2000   | 2001   | 2002   | 2003   |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Total HIPC countries  | 24,386 | 24,567 | 25,208 | 24,400 | 26,003 | 27,258 | 29,237 | 33,228 |
| % of completion point | 43     | 45     | 44     | 45     | 43     | 46     | 43     | 44     |
| Completion point (CP) | 10,507 | 11,104 | 11,120 | 10,934 | 11,123 | 12,406 | 12,455 | 14,706 |
| Sustainable(S)        | 6,505  | 6,732  | 7,052  | 7,223  | 7,516  | 8,434  | 8,545  | 10,244 |
| Non Sustainable       | 4,002  | 4,372  | 4,068  | 3,710  | 3,607  | 3,973  | 3,909  | 4,462  |
| % of (S/CP)           | 62     | 61     | 63     | 66     | 68     | 68     | 69     | 70     |
| Other HIPC countries  | 13,878 | 13,463 | 14,088 | 13,466 | 14,880 | 14,851 | 16,782 | 18,522 |

Source: World Bank Development indicators 2005 and own computation

Table 9 shows that the sustainable countries have increased exports earnings from 6,505 million US dollars in 1996 to 10,244 million US\$ in 2003. These countries contributed 62% of the completion point countries' exports in 1996 and this percentage increased to 70% in 2003. The non sustainable countries experienced a decline in their exports in 1999 and 2000 which can be attributed to the decline in commodity prices that could have affected these countries due to their high dependence on a few export primary commodities (Refer to Table C2 in appendix-C). In addition the non sustainable countries ratio of exports to GDP has declined over the years while that of the sustainable countries has remained constant. The ratio of exports to GDP of the sustainable countries is 10% higher than that of the non sustainable countries as shown in figure 3 below. Hence the difference between the post completion point sustainable and non sustainable countries is their performance in exports. The sustainable countries have a better export performance than the non sustainable countries.

**Figure 3: Post-Completion point HIPC Exports as ratio of GDP**



Source: Data from World Bank 2005 and African Development indicators 2004

We recall that in chapter three that refers to the debt management dynamics, we did not see any meaningful explanation for the difference between the sustainability and non sustainability of countries that have reached the completion points. But rather debt and interest arrears were higher for the sustainable countries. However in this case we see that the export sector of the sustainable countries is at least consistent and is better than the non sustainable countries hence sustainability depends more on the performance of exports in the HIPCs.

Another issue that we notice is that the percentage of exports contributed by all the countries who have already reached their completion point to the total HIPC's exports has not changed much since 1996 as shown in the table 9. An important implication is that there is no relationship between countries reaching completion point and an increase performance in exports. This is expected since the HIPC initiative conditionality of spending debt relief funds on poverty reduction activities has little to do with export performance. This means that the fact that countries have reached completion point does not necessarily mean that their export performance has increased which then would mean that completing the HIPC process does not mean that countries will be sustainable. This implies that the countries that are sustainable, are not so as a result of debt reduction efforts but rather due to their improved performance in the export sectors.

#### 4.4 Trade deficit and debt sustainability

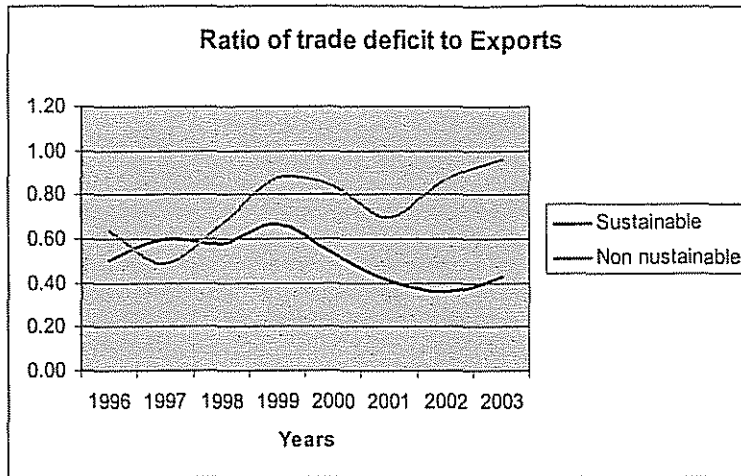
We recall in chapter 2 with reference to the conceptual framework, (equation 8) that an increase in the ratio of the trade deficit to exports ie  $((M-Ex)/Ex)$  increases the debt to export ratio and a reduction in this ratio decreases the debt to export ratio in the long run which leads to sustainability. Table 10 and figure 4 below show that this ratio has a downward trend since 1999 for the sustainable countries. The slight increase from 2002 to 2003 reflected in both the sustainable and non sustainable countries shows an overall deterioration in the debt to export ratios as shown in chapter 1. Figure 5 shows the trade deficit to export ratio of Tanzania and Uganda with Tanzania being sustainable and Uganda not. We see that the ratio for Tanzania has been declining since 1998 unlike that of Uganda. Hence Tanzania's debt to export ratio has decreased as opposed to that of Uganda. This emphasizes how export performance is important for sustainability in the HIPC's.

**Table 10: Ratio of Trade deficit to Exports for post -completion point countries**

| Years           | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|-----------------|------|------|------|------|------|------|------|------|
| Sustainable     | 0.50 | 0.60 | 0.58 | 0.67 | 0.53 | 0.41 | 0.36 | 0.43 |
| Non sustainable | 0.64 | 0.49 | 0.67 | 0.88 | 0.84 | 0.70 | 0.87 | 0.96 |
| Tanzania        | 0.74 | 0.60 | 1.08 | 0.94 | 0.58 | 0.52 | 0.44 | 0.50 |
| Uganda          | 0.96 | 0.56 | 1.12 | 0.98 | 1.06 | 1.00 | 1.23 | 1.14 |

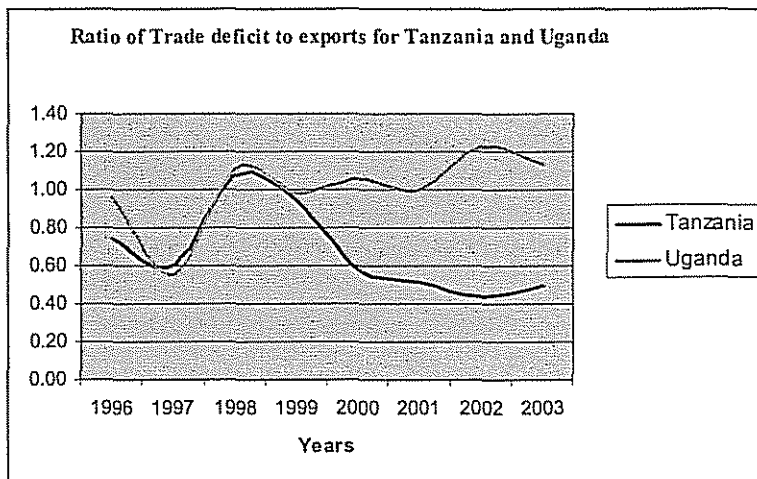
*Source: World Bank Development indicators 2005 and own computation*

**Figure 4: Ratio of trade deficit to Exports for post-completion point countries**



Source: Data from World Bank Development indicators 2005

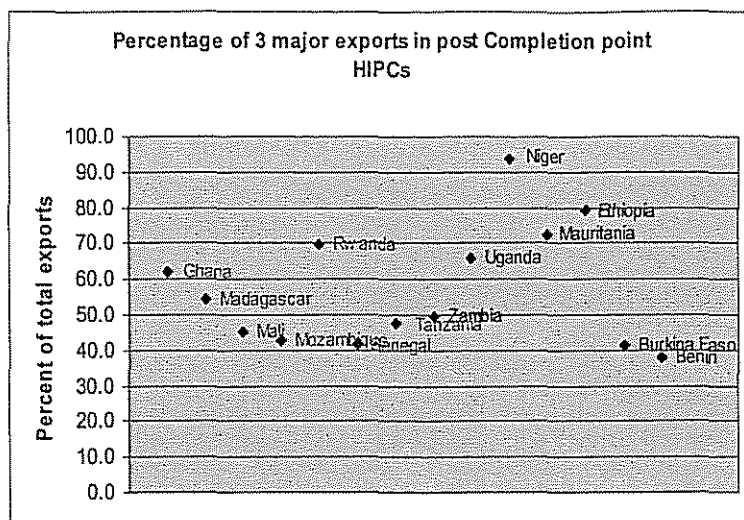
**Figure 5: Ratio of trade deficit to Exports for Tanzania and Uganda**



Source: Data from World Bank Development indicators 2005

One of the factors that could lead to poor export performance is the high dependence on primary commodities. The HIPC countries depend on a few export primary commodities with the 3 main exports contributing 60% of the total exports earnings on average (Refer to Table C2 in appendix-C). The scatter diagram below shows the extent of the contribution of the three main commodity exports to total exports of the sustainable and non sustainable countries.

**Figure 6: Contribution of three major exports in post completion point countries**



Source: Refer to table C2 in appendix-C; based on table from Alemayehu (2006)

Figure 6 shows those four out of seven sustainable countries (ie. Mali, Mozambique, Senegal and Tanzania) have their three major exports contributing less than 50% of the export earnings. While Mauritania, Ethiopia, Uganda and Niger, which are non sustainable countries, have their three primary commodities contributing more than 60% of their total exports earnings. We also see extreme cases in the non sustainable countries where the three commodities contribute over 90% of export earnings in Niger and less than 40% for Benin. However on average we see that the sustainable countries depend less on the three main products. The sustainable countries average commodity dependence over 1990 to 1992 was 62.8 and it declined to an average of 51.8 over 1997 to 1999, that of the non sustainable countries was 66.3 and 62.9 respectively over the same period (Refer to table C2 in appendix C). This shows an improvement in diversity of the exports for the HIPCs and especially the sustainable HIPCs. This implies that diversification of exports is necessary as it will enhance exports and avoid the effect of commodity price changes and decline in demand of particular commodities.

However, caution should be taken as these economies diversify since they have several problems related to small developing economies (SDEs) which involve small markets and limited capital for productive investment. SSA has an endowment-based comparative advantage in primary commodities relative to other developing country regions but lacks the advantage of proximity to markets (Manduna 2005).

There is declining demand for SSA traditional exports like cocoa, tea and coffee and an increased demand for tropical products, vegetables and agricultural products like vegetables oils, fruits and cut flowers. Hence the HIPCs in SSA need to diversify both vertically and horizontally from traditional agricultural exports to exports where the demand is growing. This requires the policy makers to develop appropriate support measures that will help farmers move into production of these export products. In order to compensate for the poor quality of land, these economies can go into exporting of minerals for those that have them. In addition these countries should be helped to diversify into manufacturing and focus on the global and regional markets other than the domestic markets.

We can already see in two completion point countries Uganda and Tanzania (Tables C3 and C4 in appendix-C) that there is a shift towards non traditional products, this should continue and should be enhanced. With reference to table C3 and figure C1 in appendix 3, it shows that since 2001, Uganda has been diversifying its exports with the non traditional exports gaining market and that more foreign currency is being received from the non traditional exports although the general level of exports is still very low. We also note that the percentage of coffee to total exports also declined. Tanzania has made progress in growing drought resistant crops of which a few are traditional crops in given areas. There has been a substantial increase in non traditional exports in Tanzania. The increase in non traditional exports is mostly attributed to gold and manufactured products that increased by 16% in 2003. Gold is now Tanzania's largest export. In the next section we shall take an example of Tanzania a sustainable country and Uganda a non-sustainable country and compare their debt and export performance.

#### **4.5 Debt and Exports performance of Tanzania and Uganda**

Table 11 below will compare the debt and export performance of Tanzania and Uganda from 1996 to 2003. It shows that Tanzania's average loan interest rate since 1996 which is 1.05 is higher than that of Uganda that is 0.80; Moreover Tanzania's debt levels are also higher. This indicates that sustainability does not actually depend much on the rate of interest on loans.

**Table 11: Debt and Export performance in million US\$ of Tanzania and Uganda**

| Years                 | 1996  | 1997  | 1998   | 1999  | 2000   | 2001  | 2002  | 2003  | Average |
|-----------------------|-------|-------|--------|-------|--------|-------|-------|-------|---------|
| <b>Exports</b>        |       |       |        |       |        |       |       |       |         |
| Tanzania              | 1,142 | 1,274 | 1,144  | 1,166 | 1,307  | 1,537 | 1,667 | 1,881 |         |
| Uganda                | 723   | 838   | 635    | 735   | 663    | 690   | 697   | 778   |         |
| <b>Exports Growth</b> |       |       |        |       |        |       |       |       |         |
| Tanzania              | 4.85  | 11.51 | -10.19 | 1.91  | 12.12  | 17.58 | 8.49  | 12.81 | 7.38    |
| Uganda                | 6.52  | 15.84 | -24.22 | 15.82 | -9.83  | 4.13  | 0.94  | 11.60 | 2.60    |
| <b>Debt</b>           |       |       |        |       |        |       |       |       |         |
| Tanzania              | 7,387 | 7,200 | 7,670  | 8,081 | 7,184  | 6,768 | 7,339 | 7,516 |         |
| Uganda                | 3,684 | 3,884 | 3,917  | 3,498 | 3,497  | 3,731 | 3,991 | 4,553 |         |
| <b>Debt Growth</b>    |       |       |        |       |        |       |       |       |         |
| Tanzania              | -0.46 | -2.53 | 6.54   | 5.35  | -11.10 | -5.79 | 8.43  | 2.42  | 0.36    |
| Uganda                | 2.86  | 5.41  | 0.86   | -10.7 | -0.02  | 6.71  | 6.95  | 14.08 | 3.27    |
| <b>Interest Rates</b> |       |       |        |       |        |       |       |       |         |
| Tanzania              | 1.30  | 1.00  | 1.50   | 1.60  | 0.90   | 0.70  | 0.60  | 0.80  | 1.05    |
| Uganda                | 0.80  | 0.80  | 0.70   | 0.80  | 1.00   | 0.80  | 0.80  | 0.70  | 0.80    |

*Source: Based on World Bank Global Development Finance Indicators 2005.*

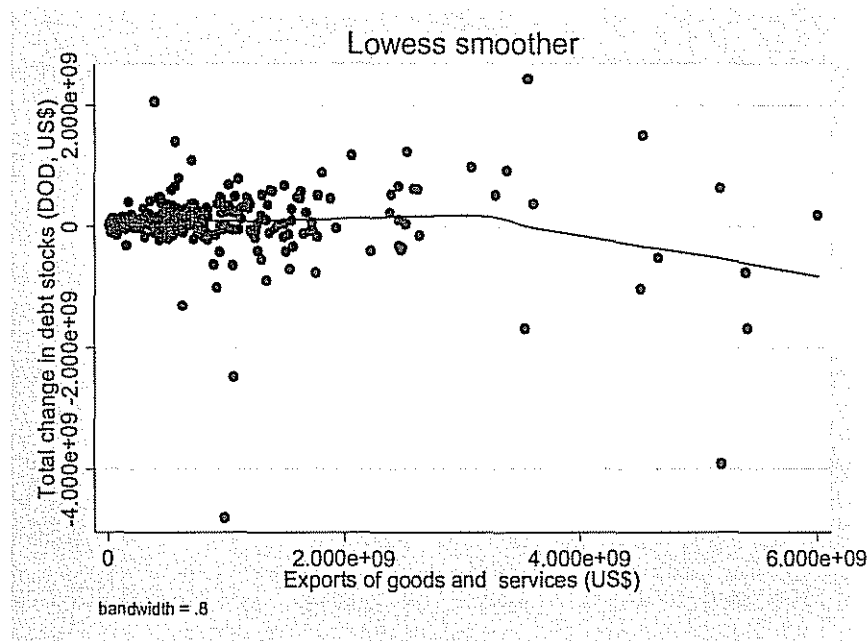
Tanzania's average export growth rate is about 7 times its interest rate and that of Uganda is only 3 times its interest rate. Hence high export growth rate and the levels of Tanzania's exports compared to those of Uganda enabled Tanzania become sustainable. This implies that sustainability does not actually depend on the debt accumulation or even the interest rate on loans or concessionality of debt but on the country's ability to pay back this debt. This does not mean that debt reduction efforts and efforts to improve on concessionality of debt are useless, but they should be used to compliment the promotion of exports. Emphasis should be put on the promotion of exports rather than interest rate and debt reduction.

Another interesting fact from table 11 is that we notice that export growth rate which is 2.60 in Uganda is higher than the average interest rate (0.80) of borrowing loans, however Uganda is not sustainable. When we recall from the theory that links debt to exports in chapter 2 about the relationship between interest rates and exports, it states that 'For the borrower to maintain debt service capacity, the rate of growth of exports must equal or exceed the rate of interest on the borrowed funds.' An assumption made is that debt and export have a linear relationship; this assumption also follows from the conceptual framework in equation 8, chapter two. The figures in table 11 show that this might not always be the case. As we see in this case the rate of growth of exports in Uganda was higher than the interest rate but Uganda is not sustainable. This then suggests it is possible that exports do not have a linear relationship with debt.



We can check for non linearity using a lowess regression. The advantage of the lowess regression is that it follows data more closely than a linear regression line. This allows us to detect non-linearity in the relationship between two variables. Figure 7 below shows a lowess smoother that plots change in debt against exports.

**Figure 7: Graph showing change in debt against exports in US\$ of HIPCs**



*Source: Based on World Bank Development indicators 2005*

We see that the impact of exports on debt is felt after exports attained a certain level. The implication is that exports will only begin to impact on debt reduction after they have achieved a certain level. Before this threshold, growth in export does not lead to debt reduction. Hence a caveat should be put on the assumption that growth rate of exports should equal or exceed the interest rate on loans; they should include that this will be true after exports achieve a certain minimum level or threshold. The challenge then is that what is the level of exports that should first be attained before an impact on debt reduction is achieved and consequently debt sustainability? And not how much debt relief should be given in order to reduce debt to sustainable levels. The focus on exports will provide foreign exchange to pay off debt and after a certain level impact on debt reduction by reducing the necessity for borrowing while provision of debt relief will not provide the foreign exchange to pay debt and in might not have sufficient impact on debt reduction due to increased new borrowings as shown in chapter III.

So far we have analyzed the debt management factors and export promotion as determinants of sustainability separately. In the next chapter we shall combine both the debt management factors and export sector performance to show how significant these factors are to debt sustainability when put together by use of a regression analysis.

## **Chapter V: Regression Analysis**

In this chapter we shall identify the type of relationship the different factors that relate to debt management and export performance have with debt sustainability. In chapter three we found that the debt management related factors could not sufficiently explain why some countries that had already reached their completion point were sustainable and others not. In chapter four we found that the sustainable countries have better export performance than the unsustainable countries. This chapter will combine both the debt management and export related factors to look at the relative effect of these factors on debt sustainability in the HIPCs. In the following sections we shall specify the model, describe the dataset, illustrate the estimation methodology and present the regression results.

### **5.1 Model Specification**

We recall that the conceptual framework in chapter two had the trade related factors on one hand and the debt management related factors on the other as shown in equations 6 to 8. This model will be specified in a similar way. We shall begin with the debt management related factors. The framework suggests that a reduction in interest payments on debt will reduce debt to sustainable levels. To this regard the HIPC initiative assumptions after provision of debt relief is that the HIPCs in SSA will receive highly concessional loans and grants that will reduce their interest payments hence reducing the burden of debt service. In chapter III we found no evidence that interest payments had been reducing consistently for the sustainable countries although there was an increase in concessional debt, in fact there was instead a greater accumulation of interest arrears.

Since we are dealing with the role of the HIPC initiative on debt sustainability, we shall focus on the provision of debt relief to the HIPCs in the bid to reduce debt to sustainable levels and the underlying assumptions that the HIPCs will receive highly concessional debt and grants. The variables to capture this in the model will be the average interest rate on loans which will show whether the rate of interest at which loans are got really does matter for debt sustainability. This is because even after increase in receipt of concessional loans, we still have accumulation of interest arrears and some countries after reaching the completion point are still not sustainable.

We shall look at the receipt of grants as a ratio of GDP, to identify the effect of increase in grants on debt sustainability and the last variable related to the debt management will be the ratio of Debt relief to debt. We found that debt relief had insufficient impact on debt, however we know that debt relief does reduce debt no matter how small the effect, hence this model will seek to find out whether this effect is significant for debt sustainability.

The second part of the model related to export performance will consider the performance of exports as a ratio of GDP. This is because it has been found that the sustainable countries have succeeded because of the higher exports and export growth and we would like to identify the relative effect of this export performance as compared to debt management. We shall also include the real effective exchange rate index and diversification of exports in this model to determine their relationship with debt sustainability. The model as a function of these variables is shown below;

$$\text{Debt/Export} = f(\text{IR}, \text{TR} / \text{GDP}, \text{DR} / \text{Debt}, \text{Ex} / \text{GDP}, \text{RER}, \text{ExDiv})$$

Where

Debt / Exports – Ratio of Debt to Exports.

IR – Average interest rates of loans.

TR / GDP – Ratio of Official transfers (Grants) to Real Gross Domestic Product

DR / Debt – Ratio of Debt Relief to Debt

Ex / GDP – Ratio of Exports to Real Gross Domestic Product

RER – Real effective Exchange Rate index

ExDiv – Exports Diversification.

## **5.2 Description of data and methodology**

Data on macro economic variables such as debt flows, exports and GDP was got from the World Bank development indicators of 2005, the World Bank global development finance indicators of 2005 and the World Bank African development indicators of 2004. The final dataset is a panel dataset consisting of 32 HIPCs in sub-Saharan Africa arranged across 13 years starting from 1990 to 2002 for each variable. The HIPCs include countries that have completed the HIPC process and those at the decision and pre-decision points.

Although the panel dataset has some missing values, the pattern of the missing values is random for different variables and countries hence we shall have no problems with attrition bias so we proceed to estimate the model using the usual panel data techniques.

In order to use the stata statistical package, the data was rearranged to suite the stata programme and commands. Panel data regression techniques were used since they consider the existence of both cross-sectional and time-series components although the results presented include the estimates of the ordinary regression methods as well. The estimates of coefficients derived using the ordinary regression methods may be subject to omitted variable bias, a problem that arises when there is some unknown variable or variables whose effect on the dependent variable cannot be controlled for. With the panel data techniques, it is possible to control for omitted variables even without observing them. By observing changes in the dependent variable over time, we control for omitted variables that differ between countries but are constant over time (Fixed Effects) and one can also control for omitted variables that are random and change over time (Random Effects). In order to determine which of the two methods give the most efficient results we will use the Hausman test. The hypothesis is stated as

$H_0: Cov(a_i, X_{it}) = 0$  or fixed effects method is consistent but inefficient & random effects method is consistent and efficient.

$H_a: Cov(a_i, X_{it}) \neq 0$  or fixed effects method is consistent and random effects method is not consistent.

Where  $Cov$  stands for covariance,  $a_i$  captures all unobserved time constant factors and  $X_{it}$  captures the independent variables. Under the null hypothesis the two effects should not differ systematically. If the alternative is true, we reject the null hypothesis of no correlation between the error terms and variables and the estimates should differ. The fixed effects estimations are the most efficient.

The derivation of the estimation methods is as shown below. Suppose a 2 period panel data analysis.

$$Y_{it} = \alpha + \beta X_{it} + u_{it}$$

The results will be biased because of omitted variables and correlation between the error term and independent variables hence we need to control for more variables so we gather repeated observations of panel data as in this paper. The unobserved factors that influence  $Y_{it}$  can be constant or random over time. Hence

$$Y_{it} = \beta_o + \delta_o d\alpha_t + \beta_1 X_{it} + a_i + u_{it}, t = 1, 2$$

Where  $d\alpha_t$  is a dummy variable that equals 0 when  $t=1$  and 1 when  $t = 2$ ,  $a_i$  captures all unobserved time constant factors (fixed effects) and  $u_{it}$  all unobserved factors that change over time. However  $X_{it}$  &  $a_i$  are likely to be correlated hence pooling the data will not help to solve the omitted variable problem. Substituting for the dummy variable and finding the difference of the two equations we get, differences away the unobserved factor such that we eliminate the problem, and we get  $\Delta Y_i = \delta_o + \beta_1 X_i + \Delta u_i$ . This does not capture the variation over time. Hence when we consider more than 2 periods such that

$$Y_{it} = \beta_1 X_{it} + a_i + u_{it}, t = 1, 2, \dots, T$$

If we average this equation over time for each  $i$  and subtract the result from the original equation we get

$\ddot{Y}_{it} = \beta_1 \ddot{X}_{it} + \ddot{u}_{it}, t = 1, 2, \dots, T$ , which is the fixed effect estimator or the with-in estimator. The model is identified by the variation in  $Y$  and  $X$  with in each observation. It is called a time demeaned equation. In case there is no correlation between  $X_{it}$  &  $a_i$  then the fixed effects results is inefficient. Suppose the unobserved factors and error term are together correlated over time, in order to correct this effect we define a value

$$\lambda = 1 - \left[ \frac{\delta_u^2}{\delta_u^2 + T\delta_u^2} \right]^{\frac{1}{2}}$$

where  $T$  is the number of periods of time. The term in brackets is

the covariance of the sum of unobserved factor and the error term.

$(a_i + u_{it}) = v_{it}$  &  $(a_i + u_{is}) = v_{is}$  and  $\lambda$  lies between 0 and 1. Hence

$$Y_{it} - \lambda \bar{Y}_i = \beta_o(1 - \lambda) + \beta_1(X_{it1} - \lambda \bar{X}_{i1}) + \dots + \beta_k(X_{itk} - \lambda \bar{X}_{ik}) + (V_{it} - \lambda \bar{V}_i)$$

Such that if  $\lambda = 1$  it is a fixed effects model, if  $\lambda = 0$  it is a pooled OLS and if  $0 < \lambda < 1$ , It is a random effects model (Wooldridge 2002).

Next we shall describe the variables in our model and present the regression results.

**i) Debt**

Debt is described as the total debt stocks expressed in US dollars. It was got from the World Bank global development finance indicators of 2005.

**ii) The average interest rate on loans**

This is the average interest rate on all new public and publicly guaranteed loans contracted during the year. It is measured in percentages. This variable will capture the effect of whether the receipt of concessional loans at lower interest rates is important for debt sustainability. It was got from the World Bank global development finance indicators of 2005.

**iii) Official Transfers (Grants)**

These grants are unrequited transfers, often used to finance balance of payments deficits. The variable was got from the World Bank African development indicators 2004. It is measured in US dollars. The grants will be expressed as a ratio of the real gross domestic product.

**iv) Debt Relief**

We shall use the variable of debt forgiveness or reduction as a proxy for debt relief and it is measured in US\$. This variable was got from the World Bank Global development finance database 2005. Debt Relief will also be expressed as a ratio of debt.

**v) Exports**

This variable is described as the exports of goods and services measured in US\$ and is got from the World Bank development indicators 2005.

**vi) Real Gross domestic product**

This variable measures the total output of goods and services for final use produced by residents and nonresidents, regardless of the allocation to domestic and foreign claims. It is calculated without making deductions for depletion and degradation of natural resources. It is got from the World Bank African development indicators 2004.

### vii) Real Effective Exchange Rate index

The Real effective exchange rate index gives a measure of price competitiveness of the country's exports relative to its trading partners. A decline (increase) in the index indicates real depreciation (appreciation) of the exchange rate. It was got from the World Bank African development indicators 2004.

### viii) Export Diversification

This variable was got from a table presented in a paper written by Alemayehu 2006. It is presented as a percentage of contribution of the three major exports in the HIPCs to the total exports earnings. Therefore an increase in this variable means that there is less diversification and a decline shows more diversification. For the years 1997 to 2002 I used the average values of 1997 to 1999 given in the table C2, appendix C, for 1990-1992 I used the averages given in the table, while for the years between 1992 and 1997 I used the average value of the years 1992 and 1997. This variable is measured in percentages.

## 5.3 Regression results.

**Table 12: Dependent variable: Ratio of Debt to Exports.**

| Variables | Pooled OLS           | Fixed Effects        | Random Effects       |
|-----------|----------------------|----------------------|----------------------|
| Constant  | 8.789***<br>(1.606)  | 11.269***<br>(2.711) | 10.599***<br>(2.441) |
| IR        | -0.262<br>(0.235)    | -0.104<br>(0.163)    | -0.109<br>(0.161)    |
| TR /GDP   | 0.390***<br>(0.069)  | 0.216**<br>(0.086)   | 0.220***<br>(0.080)  |
| DR/ Debt  | -0.076<br>(0.056)    | -0.113***<br>(0.036) | -0.113***<br>(0.036) |
| Ex / GDP  | -0.187***<br>(0.023) | -0.297***<br>(0.039) | -0.274***<br>(0.034) |
| RER       | -0.009<br>(0.013)    | 0.018<br>(0.011)     | 0.015<br>(0.011)     |
| ExDiv     | 0.047***<br>(0.017)  | 0.020<br>(0.042)     | 0.026<br>(0.033)     |
| Hausman   | Prob>chi2            |                      | 0.661                |

\*\*\* & \*\* represent significance at 1% and 5% respectively

Table 12 presents the results of the three estimation methods used. We have the ordinary pooled regression results, fixed effects and the random effects estimation results. The reason why i have presented results for all estimations is to check for the consistency or inconsistency in the coefficients of variables for the different methods.



This will help us determine whether the unobserved factors have a great influence on the magnitude and significance of results obtained. The fixed effects estimates as indicated earlier take into consideration the unobserved factors like political instability or market availability among other factors in this case that are specific for each country and vary with time. Using the Hausman test we find that we fail to reject the null hypothesis that there is no correlation between the error terms and the independent variables. Hence there is no auto correlation between the unobserved factors and the variables in the regressions. In this case as shown earlier both the fixed effects and random effects estimates are consistent; however the random effects estimates are more efficient. This is not surprising since we are dealing with a short period hence it is unlikely that we will have a lot of variation with in each country say for a variable like diversification. The advantage with the random effects estimates is that inference can be made to countries outside the model well as for the fixed effects estimates we can only refer to the countries selected in the sample regression. We note however that there is no much difference in the magnitude and significance of the coefficients between the fixed and the random estimates.

We shall begin our interpretation with the variables that are related with debt management. These are the average interest rate on loans, official transfers or grants as a ratio of GDP and debt relief as a ratio of debt. The coefficient of the interest rate is not significant and shows a negative effect in determining the ratio of debt to exports for all the three estimation methods in the table. This means that an increase in the average interest rate on loans will lead to a reduction in the debt to export ratio. In terms of the significance of this variable, my expectation was that the average interest rate on loans will not be significant for sustainability since the receipt of highly concessional loans (or loans with a lower interest rate) simply suppresses the interest rate payments but still requires repayment in the future and still contributes to accumulation of debt stock. With regards to the negative sign of interest rate which can be interpreted<sup>9</sup> as a 1% increase in the average interest rate will reduce the debt to export ratio by 0.11. We should be cautious with this; this is because in the HIPCs it is believed that a substitution of non concessional debt with more concessional debt that has lower interest rates is meant to reduce the interest payments in these countries, hence leading to debt sustainability since with time the interest payments will be manageable. Hence it is easy for one to believe more concessional debt or debt with lower interest rates will lead to sustainability.

However as we saw in chapter three most of the debt flowing in or the disbursements to the HIPC's is concessional debt, as a result debt in the HIPC's has increased. Moreover we see that for some completion point countries even with a lower average interest rate on loans than the sustainable countries eg. Uganda and Tanzania (Table 11; chapter IV) have still failed to achieve debt sustainability. The regression results then show that since a decrease in the interest rates has instead led to an accumulation of debt stock, an increase in the interest rate on loans should decrease the rate at which these countries borrow, and would reduce debt. The logic of the insignificance of this coefficient is that what really matters for sustainability will not be the rate of interest at which the HIPC's borrow but rather at whichever interest rates countries borrow they are able to channel the use of this money to promote productive sectors that will help them get foreign funds and become self sufficient reducing the need to borrow and at the same time enabling countries to pay off their debt obligations.

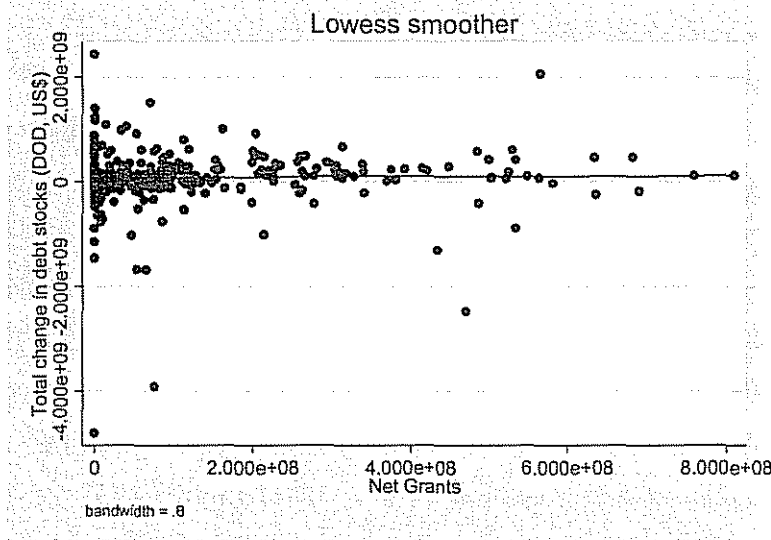
The HIPC initiative implicit assumption is that there will be an increase in the flow in of grants to the HIPC's. This is because it is assumed that increase in flow of grants will lead to a reduction in debt inflows. According to our results in chapter III, we see that there was no particular increase in grants inflows in the HIPC's moreover the grants are not even sufficient to cover the trade deficit in the countries. My expectation would be that in this model grants are insignificant in debt sustainability in the HIPC's. The results however show that the grants are significant at 1% level of significance for both the random effects and pooled effects estimation while for the fixed effects they are significant at 5%. They have a positive sign. An increase in the level of grants to GDP will increase the debt to export ratio by 0.22. This result is contrary to even what the conceptual framework suggests in chapter two. An increase in grants should lead to a reduction in debt other factors constant. In this case however the result shows that it does not. This can be explained by the fact that these countries are already indebted so at this point they need to find solution for being solvent or reducing their debt burden. Although receipt of grants requires no future interest payments, this will not ensure that these countries are able to pay their already existing debt obligations and moreover this does not even mean countries are not contracting new loans.

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<sup>9</sup> The magnitudes quoted are those of the random effects estimation results.

The fact that receipt of grants increases this ratio suggests that we could even have a disincentive of exports where this might lead to an appreciation of the exchange rate leading to a reduction of exports hence an increase in the debt to export ratio. Also increase in grants from theory will tend to increase public expenditure on development (MDGs) incase of the HIPCs. The need to spend more on development will then lead to more borrowing hence leading to accumulation of debt. However what we can be certain of is that increase in receipt of grants by the HIPCs is not likely to reduce the requirement or need for borrowing. Figure 8 below shows that unlike the exports where an increase in exports after a certain level impact on a reduction in debt (Figure 7), for the grants we see no impact on the change in debt stocks.

**Figure 8: Graph showing change in debt stock and grants for the HIPCs in SSA.**



*Source: Based on World Bank Development Indicators 2005.*

The final variable relating to debt management is the ratio of debt relief to debt. Since in chapter three we found that debt relief is not sufficient for the reduction of debt and consequently debt sustainability, my expectation was that since this variable actually directly reduces debt though not sufficiently it would have a negative sign but would be insignificant. The results show that the ratio of debt relief to debt does have a negative sign and is also significant. Since we saw that debt relief had insufficient impact in the previous chapter as compared to the amount of debt stock accumulation, we can say that other factors remaining constant debt relief is actually important in debt reduction and will reduce debt hence decreasing the numerator of the debt to export ratio.

Although the underlying assumptions of the HIPC initiative of increase in highly concessional debt and/or grants are not certain for the purpose of sustainability, we see that provision of debt relief was a good initiative for the reduction of debt. However we should note that debt management does not depend on only debt relief but also on whether countries are still borrowing and are able to pay. The ability to pay can be enhanced through the export performance of these countries.

The next set of variables indicates the export performance of the HIPCs. We shall look at the ratio of export to GDP, the Real exchange rate index and the variable reflecting the diversification of exports. As expected we see that the variable of exports to GDP is significant at 1% in all three model estimations. An increase in the level of exports to GDP will lead to a reduction in the ratio of debt to exports by 0.27; this impact doubles that of debt relief (0.11). This then means that export performance has greater impact or influence on debt sustainability than debt relief. Hence improvement of export performance should pre-dominate provision of debt relief. That is export performance should be looked at first in considering debt sustainability in these countries.

We see that the variable of the real exchange rate shows that an appreciation (increase) of the real effective exchange rate index will lead to an increase in the debt to export ratio. This is consistent in the sense that an appreciation will lead to a contraction of exports that will lead to an increase in the debt to export ratio. In the pooled regression estimate this coefficient shows that an appreciation leads to a decline in the debt to export ratio. This indicates that the effect of the omitted variables bias is relevant for the real exchange rate as well as diversification. We see that the variable on diversification is significant for the pooled regression but this is a biased result since when we use the fixed and random effects estimation it is not significant. The sign of export diversification measured by the percentage of three commodities on total exports shows that an increase in the commodity dependence will increase the ratio of debt to exports by 0.02, which implies that diversification or a reduction in dependence will reduce the ratio of debt to export. The fact that it is not significant could imply that other factors that affect export earnings like market availability need to be considered as well; hence diversification on its own is not enough to lead to debt sustainability. On the other hand since the diversification of exports and the exchange rate directly affect the export performance.

Once we control for exports then these variables become superfluous which affects the significance of the real exchange rate and diversification. As we saw in the previous chapter caution should be taken even when the HIPCs are diversifying their exports. So far these countries are still in the diversification process and the policy makers should develop appropriate support measures that will help increase export earnings. Otherwise the benefits of diversification might not be realized.

When we compare the variables related with debt management and the export performance variables, the assumptions of increase in highly concessional loans and grants does not lead to a decline in debt to export ratio while an increase in debt relief will reduce the debt to export ratio other factors constant. However export performance also leads to sustainability and has a greater impact on the reduction in the debt to export ratio than debt relief. Given that debt in HIPCs has increased due to the concessional borrowing and data in chapter III shows that although debt relief had an effect on debt it is not sufficient this indicates that debt relief is not sufficient to be used as a driving force to lead countries to sustainable positions. Moreover the underlying assumptions serve to increase the ratio of debt to exports as shown above. Therefore export performance in the HIPCs should be given emphasis and should be used to drive HIPCs out of their debt problems. This is because it will provide foreign exchange to be used to repay debt hence reducing the debt burden and consequently increase in self sufficiency of the HIPCs, which will reduce need for debt relief. One of the ways the exports should be enhanced is through diversification of their products and appropriate policy support to ensure that the benefits of diversification are realized. Care should also be taken not to allow the appreciation of the exchange rates in these economies since this will have a negative impact on the exports.



## **Chapter VI: Summary, Conclusion and Policy Implications**

As indicated in chapter I, the main factors that led to a debt problem for the HIPC's of SSA in the past were the mounting debt, higher interest payments and declining export earnings. Since then debt relief efforts have been in place to help these countries solve their debt problems. Currently we have the HIPC Initiative that was meant to provide debt relief that will reduce the HIPC's debt to sustainable levels, but we see that some countries are not sustainable even after completing the HIPC Initiative process. There are more countries still going through the HIPC Initiative process and the MDRI is in place for the countries that have completed the HIPC process. The MDRI has been set up to provide 100% debt forgiveness for the post completion point countries. We note that the routine of increasing the amount of debt relief plus contracting new loans on highly concessional terms has not always yielded promising prospects for debt sustainability in the HIPC's. One of the reasons of this has been the poor export performance of the HIPC's of SSA.

The main objective of this paper was to investigate the relative importance of debt management schemes and export performance in determining debt sustainability in the HIPC's of SSA. This was done by looking first at the time path of factors that affect debt accumulation and export performance in two groups of post completion point countries. That is those currently sustainable and those that are not. This analysis was consolidated by using regression analysis in chapter V to see the relative effect of these factors on debt sustainability.

The general trends of the factors related to debt management in the HIPC's do not provide sufficient explanation as to why some countries are sustainable and others are not. This is because we do not observe a consistent decline in debt stock while there have been accumulation of arrears irrespective of whether the countries are considered sustainable or not. We note that the HIPC initiative assumes an increase in concessional debt and grants or official transfers in the HIPC's. In chapter III we saw that since 1996 official transfers were not particularly increasing although the sustainable countries had considerably higher official transfers than the non sustainable countries. However for both groups of countries the official transfers were not sufficient to cover the current account deficit.

Hence on one hand the HIPC Initiative assumption of increase in grants has not been met and on the other hand it is most unlikely that an increase in official transfers does lead to debt sustainability as we shall see later on. On the contrary we see that the HIPC assumption of increase in concessional loans was met. However the non sustainable countries received more concessional debt than the sustainable countries. The implicit assumption is that an increase in concessional debt does not necessarily lead to debt sustainability. It is rather those countries whose concessional debt that was relatively lower in the early 2000s as compared to the late 1990s that are sustainable. As a result we see an increase in the interest payments of the non sustainable countries and a decline in that of sustainable countries. However it was also discovered that the sustainable countries accumulated more interest arrears than the non sustainable countries which by definition is not expected of debt sustainability. Moreover we also saw an increase in debt stock from 2001 onwards which indicates that debt relief had insufficient impact on debt reduction.

Chapter IV captured the trend of export performance in the HIPCs and we found out that in general the HIPCs export sector's performance is much lower than that of the Non-HIPCs. This shows that the export sector in the HIPCs needs to be enhanced. However with regards to the performance of exports with in the HIPCs, the post completion point sustainable countries have a better export performance than the non sustainable countries. This gives a logical explanation as to why these countries are sustainable. However we did not see a correlation between countries reaching completion point and improved export performance which explains why some countries remain unsustainable even after finishing the HIPC process. When we compared the debt and export performance of Tanzania and Uganda the former being sustainable and the latter unsustainable, we found that the debt, average interest rate on loans and the export growth of Tanzania were much higher than that of Uganda. This is an indicator that debt sustainability then depends more on export performance than on debt accumulation. In addition we discovered that exports begin to impact on reduction in debt stock after achieving a certain minimum level which indicates non linearity in the relationship between debt stock and export growth. That is higher export growth will not automatically impact on debt except if these countries have attained a certain minimum threshold of exports. Hence HIPCs should seek to determine what threshold this might be.



The main findings from the regression analysis show that the average interest rate on loans is not significant for debt sustainability. This is not surprising since receipt of more concessional loans simply suppresses interest payments but still requires repayment in the future. Moreover lower interest rates on loans might even encourage countries to contract more debt which might worsen debt sustainability in the long run. This was seen in chapter II where the non sustainable countries have more concessional debt than the sustainable countries. Hence increase in concessional debt is indeed not sufficient for debt sustainability. We also find that the official transfers are significant but they increase the ratio of debt to exports. This is could be because for the already highly indebted countries, increase in grants will not ensure that they are able to pay back their debt obligations nor does it mean that these countries will not contract more loans. As a result the increase in total aid inflows would accentuate the Dutch-disease problem that undermines the export growth which in turn lowers the prospects of debt sustainability. We also found that increases in both debt relief and export performance significantly reduce the debt to export ratio. However the effect of an improvement in exports on debt sustainability doubles the effect of debt relief on debt sustainability. This indicates that the performance of the export sector is the driving force to debt sustainability in the HIPCs. Therefore debt sustainability depends more on a country's ability to pay back its debt obligations than on the reduction in debt stock.

Some of the policy implications are that HIPCs should continue to adopt deliberate policies to depreciate their currencies so as to enhance exports. They also need to diversify their exports from traditional exports to non traditional exports. As we saw that some countries like Tanzania and Uganda have already started exporting non traditional products. However more efforts need to be added by the HIPCs' policy makers in designing appropriate policies for the export sector that will increase the returns of exports diversification. Efforts should also be made to establish regional and global markets for these products. In addition deliberate policies to enhance export performance in the HIPCs should not be regarded as a problem for international effective trade but rather as a solution that will enhance economic growth in these countries and consequently lead to debt sustainability. Export performance of the HIPCs should be given more priority than provision of debt relief to help the HIPCs embark on a concrete sustainable path.



## References

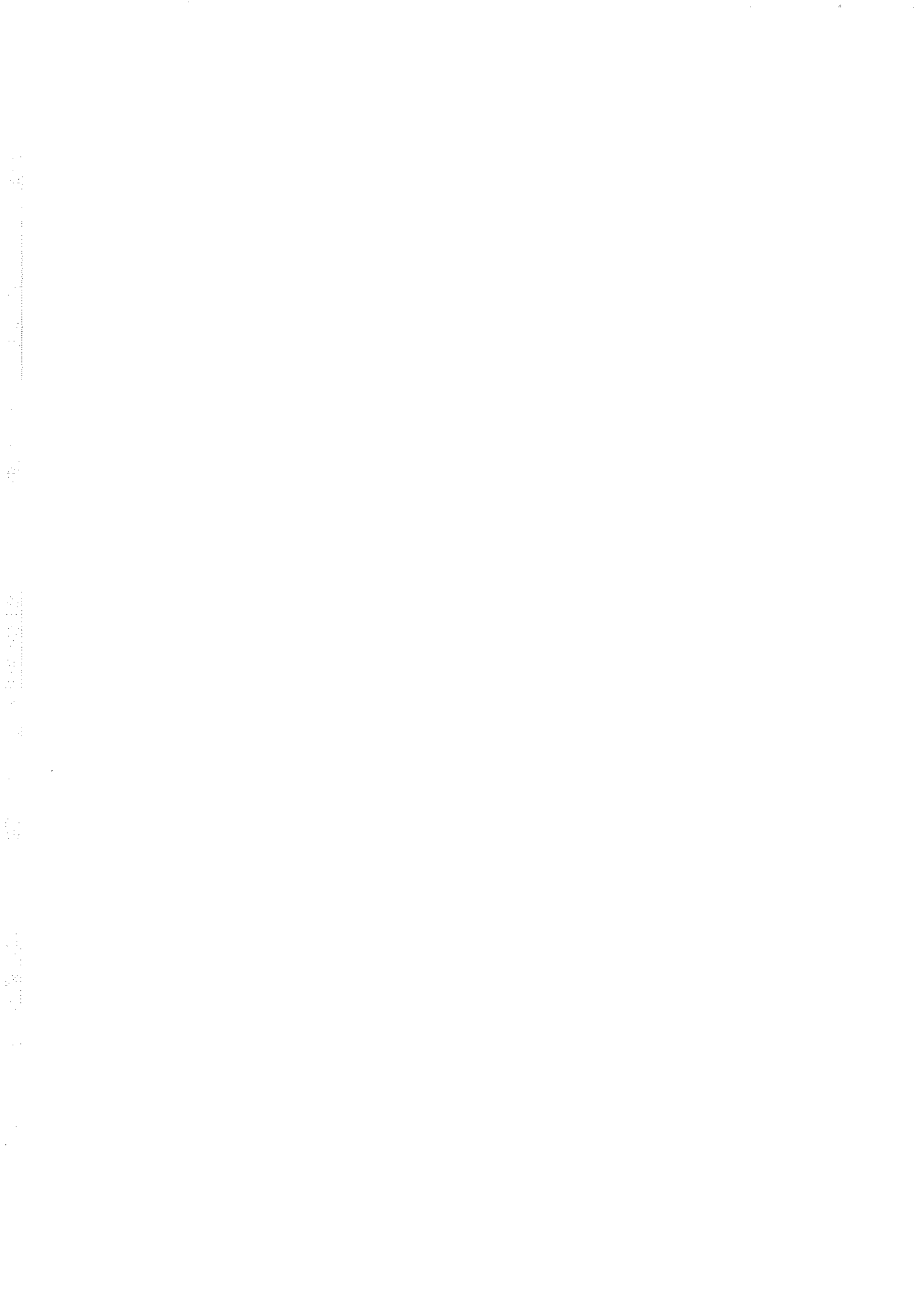
1. Abdessater Ouannes and Subhash Thakur (1997) "*Macroeconomic Accounting and Analysis in Transition Economies.*" International Monetary Fund.
2. Abrego Lisandro and Doris C. Ross (2001) "*Debt Relief Under the HIPC Initiative: Context and Outlook for Debt Sustainability and Resource Flow.*" International Monetary Fund Working Paper Series; WP/01/144
3. Ajayi S.Ibi and Mohsin S. Khan (2000) "*External debt and capital flight in Sub Saharan Africa.*"
4. Alemayehu Geda (1997) "*The Historical origin of African debt and External finance problems.*" Institute of Social Studies working paper series.
5. \_\_\_\_\_ (2002) "*Finance and Trade in Africa: Macroeconomic Response in the World Economy Context.*" Palgrave Macmillan, London.
6. \_\_\_\_\_ (2003) "*The Historical Origin of African Debt Crisis.*" Eastern Africa Social Science.
7. Alemayehu Geda (2006) "*Openness, Inequality and Poverty in Africa*" United Nations; Department of Economic and Social Affairs (DESA) Working Paper No. 25.
8. Aliber A.Robert (1980); "*A conceptual Approach to the analysis of External Debt of developing countries*" Washington DC.
9. Anthony R. Boote and Kamau Thugge (1997) "*Debt Relief for Low-Income Countries and the HIPC Initiative*" International Monetary Fund
10. Atakilt Hagos Baraki (2005) "*External Debt and economic growth in Sub-Saharan Africa: A cross-country panel data analysis.*" Institute of Social Studies. The Hague.
11. Avramovic, Dragoslav *et al.* (1964) "*Economic Growth and External Debt.*" Baltimore: Johns Hopkins Press (for the World Bank). Available on internet at <http://www-wds.worldbank.org>
12. Axel van Trotsenburg and Alan MacArthur1 (1999): "*The HIPC Initiative: Delivering Debt Relief to Poor Countries*" Also available on internet <http://www.imf.org/external/np/hipc/art0299.pdf>
13. Bank of Uganda (2004/05) "*Bank of Uganda Annual Report*" Available on website <http://www.bou.or.ug>
14. Berensmann Kathrin (2004) "*How to ensure debt sustainability beyond the HIPC-Initiative?*" Discussion Paper; Economist at the German Development Institute, Bonn (Germany).

15. Callisto M and Gobind N (IDA) Abdoulaye B.T. and Michael Hadjimichael (IMF) (2002) "*Updated debt sustainability Analysis and assessment of public External debt management capacity.*" International Monetary Fund and International Development Association.  
<http://www.imf.org/External/NP/hipc/2002/uga/ugadsa.PDF>
16. Catherine Patillo, Helene Poirson and Luca Ricci (2002) "*External Debt and Growth.*" International Monetary Fund, Working Paper.
17. Christopher Adam (2005) "*Exogenous Inflows and Real Exchange Rates: Theoretical Quirk or Empirical Reality*" International Monetary Fund
18. Christopher S.Adam and David L. Bevan (2004) "*Aid and the Supply Side: Public Investment, Export Performance and Dutch Disease in Low income countries*" The World Bank
19. Claudio M. Loser (2004) "*External Debt Sustainability; Guidelines for Low- and Middle-income Countries.*" G-24 Discussion Paper series.
20. Cohen, Daniel (1996). "*The Sustainability of African Debt*". World Bank Policy Research Department Working Paper No. 1691.
21. Collier Paul (2002) "Primary Commodity dependence and Africa's future." World Bank Research Paper: Available on line at [http://econ.worldbank.org/files/14984\\_Collier-full.pdf](http://econ.worldbank.org/files/14984_Collier-full.pdf).
22. Craig Burnside and Domenico Fanizza (2004): *Debt Delief and Fiscal Sustainability for HIPC's*. Duke University and International Monetary Fund.
23. Deryke Belshaw and Ian Livingston (2002) "*Renewing Development in Sub-Saharan Africa: policy, performance and prospects*"
24. Dillon K.B (1985) "Recent Developments in External Debt Restructuring"
25. Fielding David (1997). 'Modelling the determinants of government expenditure in sub-Saharan africa', *Journal of African Economies* 6(3): 377-90.
26. Gallagher Mark (1994). "Government spending in Africa: a retrospective of the 1980s." *Journal of African Economies* 3(1): 62-92.
27. Geithner Timothy and Gobind Nankani (2002) "*The Enhanced HIPC Initiative and the Achievement of Long-Term External Debt Sustainability.*" International Monetary Fund and International Development Association
28. Gujarati Damodar N. (2003) – "*Basic Econometrics, fourth Edition.*" Mc Graw-Hill/ Irwin Companies, United States.

29. Hjertholm Peter (2001) *"Debt Relief and the Rule of Thumb: Analytical History of HIPC Debt Sustainability Targets"* Discussion Paper No. 2001/68
30. Hope N.C (1981) *"Developments in and prospects for the External Debt of developing countries. 1970-80 and beyond"*
31. H.W.Singer, Neelambar Hatti, Rameshuar Tandon (1991) *"Adjustment and Liberalisation in the third World"* Part of New World order series.
32. H.W.Singer, Neelambar Hatti, Rameshuar Tandon (1991) *"Aid and External Financing in the 1990s"* Part of New World order series.
33. International Monetary Fund (2000) *"Debt and Reserve Related Indicators of External Vulnerability."* Prepared by the Policy Development and Review Department in consultation with other Departments. Available on internet at <http://www.imf.org/external/np/pdr/debtres/debtres.pdf>
34. \_\_\_\_ (2002) *"Assessing Sustainability"* Prepared by the Policy Development and Review Department. Available on internet at <http://www.imf.org/external/np/pdr/sus/2002/eng/052802.pdf>
35. International Monetary Fund, 2003a, *"Debt Sustainability in Low-Income Countries towards a Forward-Looking Strategy."* Prepared by the Policy Development and Review Department and via internet: <http://www.imf.org/external/np/pdr/sustain/2003/052303.htm>
36. Jubilee Research (2003) *"Real Progress Report on HIPC,"* published by Jubilee Research pp 1-23.
37. Karel Jansen (1987) *"International capital flows and economic adjustment in developing countries."* Institute of Social Studies; Working Paper Series.
38. Karl Wohlmuth (2000/01) *"Africa's reintegration into the World Economy"* Part A: Basic Issues
39. Kathie L. Krumm (1985) *"The External Debt of Sub Saharan Africa Origins, magnitude and implications for action."* Washington DC, World Bank staff working paper.
40. Keymisrak Bethanu (2003) *"External Debt and the Current Account Sustainability."* Analysis of the HIPC Initiative in Ethiopia. A Research Paper at Institute of Social Studies The Hague.
41. Kimune John Mugare (1986) *"The problem of External Debt burden on Sub Saharan African economies"* Institute of Social Studies; The Hague
42. King, Benjamin (1968). *"Notes on the Mechanics of Growth and Debt."* World Bank Staff Occasional Papers 6, Washington, DC: World Bank. Also available on internet <http://www-wds.worldbank.org/>

43. Koeda Junku (2004) "Grants or concessional loans? Aid to Low-Income countries with a participation constraint" Available on line at [http://www.e.u-tokyo.ac.jp/cirje/research/workshops/macro/macropaper04/koeda\\_revised.pdf](http://www.e.u-tokyo.ac.jp/cirje/research/workshops/macro/macropaper04/koeda_revised.pdf)
44. Kraay Aart and Vikram Nehru (2004) "*When is debt sustainable?*" The World Bank. World Bank Policy Research Working Paper 3200. Available on internet <http://siteresources.worldbank.org>
45. Lucia Hanmer and Ruth Shelton (2001) "*Sustainable Debt: What has HIPC Delivered?*"
46. Luis Jemio and Rob Vos (1993) "*External shocks, debt and adjustment : A CGE model for the Phillipines*"
47. Luke Fletcher, Ana Paula Lima and Ryan Buddenhagen (2006) "*A Case for Debt Relief*" A Research Paper by Jubilee Australia.
48. Manduna Calvin (2005) "Assessing the causes of sub-Saharan Africa's declining exports and addressing supply-side constraints" WP/ 2/2005 June . Available on internet at [http://www.tralac.org/pdf/tralac\\_WP2.2005\\_Assessing\\_the\\_Causes.pdf](http://www.tralac.org/pdf/tralac_WP2.2005_Assessing_the_Causes.pdf)
49. Marriana Belloc and Pietro Vertova (2003) "*On foreign debt sustainability of developing countries towards a long run approach for development*" University of Siena, Siena, Italy: Available on line at <http://www.druid.dk/conferences/winter2003/Paper/Vertova.pdf>
50. McDonald, D.C. (1982) "*Debt Capacity and Developing Country Borrowing: A Survey of the Literature.*" IMF Staff Papers 29(4): 603-49.
51. Nicolas Depetris Chauvin (2005) "*What has 100 Billion Dollars Worth of Debt Relief Done for Low-Income Countries?*" Princeton University and Inter-American Development Bank.
52. Ouattara Bazoumana and Eric Strobl (2004) "*Foreign Aid Inflows and the Real Exchange Rate in the CFA Franc Zone.*" Also available on internet [www.nottingham.ac.uk/economics/research/credit](http://www.nottingham.ac.uk/economics/research/credit)
53. Sahn David .E. (1992) "*Public expenditures in sub-Saharan Africa during a period of economic reforms.*" World Development 20(5): 673-93.
54. Samuel Wangwe (2000/01) "*Exporting Africa; African Export Prospects and Perspectives after 2000*" in "*Africa's reintegration into the World Economy*" Part B. Country Cases.
55. Shaw Christopher L., Polycarp Musunguzi, Yusuf Abdalla , Daniel Plunkett, Germina Ssemogerere, (2000) "*Opportunities for Ugandan Exports in the Context of WTO Trade Liberalization; Analysis and Recommendations*"

56. Sheinin Y (1985) *"External Debt and capital accumulation in a small open economy"*
57. Syed M. Ali Abbas (2005) *"Foreseeing another HIPC: The Response of a Post-HIPC Economy"* Oxford University, UK
58. Todd Moss (2006) Briefing on *"The G8 Multilateral Debt Relief Initiative and Poverty Reduction in Sub-Saharan Africa."*
59. UN Millennium Project (2005) Resources Required to Finance the Millennium Development Goals. Chapter 17 in *Investing in Development, A practical Plan to Achieve the Millennium Development Goals*, Earthscan, London. Pp 239 - 257
60. Vos Rob (1994) *"Debt and adjustment in the world economy: structural asymmetries in North-South interactions."*
61. Wooldridge, Jeffrey M. (2002) *"Econometric analysis of cross section and panel data."* Chapter 13
62. World Bank (2003) *"Debt Relief for the Poorest; an OED Review of the HIPC Initiative."* The World Bank, Washington DC. Available online at <http://www.worldbank.org/ieg>
63. World Bank (2004) World Bank African development indicators . CD-Rom
64. World Bank (2005) World Development Indicators database, The World Bank, Washington DC.
65. World Bank (2005) Global Development Finance database, 2005. The World Bank, Washington DC.
66. \_\_\_\_\_ (2005) "How to do a Debt Sustainability Analysis for Low-Income Countries" A guide to LIC Debt Sustainability Analysis and available via internet  
<http://siteresources.worldbank.org/INTDEBTDEPT/Resources/DSAGUIDEv7.pdf>
67. World Bank (2006) *"Debt Relief for the Poorest; An Evaluation Update of the HIPC Initiative"* The World Bank, Washington DC.
68. Yan Sun (2004) *"External Debt Sustainability in HIPC Completion Point Countries"* International Monetary Fund Working Paper; WP/04/160
69. Yeats A.J., Amjadi A, Reincke U and Ng F (1996) *"Did External Barriers Cause the Marginalisation of sub-Saharan Africa in World Trade?"* World Bank Policy Research Working Paper No. 1586. World Bank: Washington. Available online at <http://econ.worldbank.org>.





## Appendixes

### Appendix-A: MDGs and status of HIPC

#### List of Millennium Development Goals (MDGs)

1. To eradicate hunger and poverty
2. To increase enrolment and retention of children at primary and post primary levels.
3. To promote gender equality
4. To reduce child mortality rate
5. To reduce the maternal mortality rate
6. To prevent rapid spread of HIV/AIDs, Malaria and other major diseases
7. To reverse loss to environmental resources, increase water and sanitation and improve the lives of slum dwellers.
8. Improve access to essential medicines
9. To improve access to information and communications technology.

**Table A1: Status of countries under the enhanced HIPC initiative (2006)**

|                             | Post-completion point   | At decision point  | Pre-decision point   | Potentially eligible for HIPC  |
|-----------------------------|---|--|--|--|
| Early (before July 2002)    | Bolivia, Burkina Faso, Mauritania, Mozambique, Tanzania, Uganda (6)   | Benin, Cameroon, Chad, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Madagascar, Malawi, Mali, Nicaragua, Niger, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Zambia (20) | Burundi, Central African Republic, Comoros, Cote d'Ivoire, Democratic Republic of Congo, Lao PDR, Liberia, Myanmar, Republic of Congo, Somalia, Sudan, Togo (12) |  |
| Late (after July 2002)      | Benin, Ethiopia, Ghana, Guyana, Honduras, Madagascar, Mali, Nicaragua, Niger, Rwanda, Senegal, Zambia (12)  | Burundi, Democratic Republic of Congo (2)  |  | Bangladesh, Bhutan, Eritrea, Haiti, Kyrgyz Republic, Nepal, Sri Lanka, Tonga (8) |
| Total (as of February 2006) | Benin, Bolivia, Burkina Faso, Ethiopia, Ghana, Guyana, Honduras, Madagascar, Mali, Mauritania, Mozambique, Nicaragua, Niger, Rwanda, Senegal, Tanzania, Uganda, Zambia (18) | Burundi, Cameroon, Chad, Democratic Republic of Congo, Gambia, Guinea, Guinea-Bissau, Malawi, Sao Tome and Principe, Sierra Leone (10)   | Central African Republic, Comoros, Cote d'Ivoire, Lao PDR, Liberia, Myanmar, Republic of Congo, Somalia, Sudan, Togo (10)  | Bangladesh, Bhutan, Eritrea, Haiti, Kyrgyz Republic, Nepal, Sri Lanka, Tonga (8) |

Source: World Bank Independent Evaluation Group Report (2006) based on World Bank and IMF 2005

**Table A2: List of sustainable and unsustainable countries**

| Sustainable | Unsustainable |
|-------------|---------------|
| Ghana       | Zambia        |
| Madagascar  | Uganda        |
| Mali        | Niger         |
| Mozambique  | Mauritania    |
| Rwanda      | Ethiopia      |
| Senegal     | Burkina Faso  |
| Tanzania    | Benin         |

Source: Based on table 1 in chapter 1

#### Appendix-B: Principal Arrears

**Table B2: Principal arrears in millions of US\$ for HIPC in SSA**

| Years             | 1996   | 1997   | 1998   | 1999   | 2000   | 2001   | 2002   | 2003   |
|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Principal arrears | 29,661 | 26,633 | 28,358 | 22,197 | 22,314 | 22,197 | 18,236 | 20,203 |
| Completion point  | 10,079 | 9,692  | 10,268 | 4,279  | 3,991  | 3,352  | 3,027  | 3,097  |
| Sustainable       | 4,505  | 3,610  | 3,564  | 2,773  | 2,604  | 2,050  | 1,668  | 1,765  |
| Non sustainable   | 5,575  | 6,082  | 6,704  | 1,506  | 1,387  | 1,302  | 1,359  | 1,332  |
| other HIPC        | 19,582 | 16,941 | 18,090 | 17,918 | 18,323 | 18,845 | 15,209 | 17,106 |

Source: Own computation from World Bank Global Development Finance 2005

#### Appendix-C: Export Performance and diversification

**Table C1: SSA Exports and Imports in million US\$**

| Years     | HIPC   |        | Non HIPC |        | Total   |         | % HIPC |       |
|-----------|--------|--------|----------|--------|---------|---------|--------|-------|
|           | Ex     | M      | Ex       | M      | Ex      | M       | Ex     | M     |
| Av. 1970s | 9,012  | 10,935 | 17,640   | 16,834 | 26,652  | 27,768  | 33.81  | 39.38 |
| Av. 1980s | 17,244 | 22,424 | 40,178   | 36,427 | 57,423  | 58,851  | 30.03  | 38.10 |
| Av. 1990s | 21,471 | 28,079 | 63,341   | 59,518 | 84,812  | 87,597  | 25.32  | 32.06 |
| 2000      | 26,003 | 31,654 | 83,905   | 72,241 | 109,907 | 103,895 | 23.66  | 30.47 |
| 2001      | 27,258 | 33,059 | 80,015   | 71,731 | 107,273 | 104,790 | 25.41  | 31.55 |
| 2002      | 29,237 | 34,949 | 82,998   | 77,622 | 112,235 | 112,571 | 26.05  | 31.05 |
| 2003      | 33,228 | 39,954 | 102,083  | 93,828 | 135,311 | 133,782 | 24.56  | 29.87 |

Source: World Bank Development indicators 2005 and own computation

**Table C2: Export Share (%) of three principal commodities of HIPCs in SSA**

| Countries                | 1970        | 1990-1992   | 1997-1999   |
|--------------------------|-------------|-------------|-------------|
| <b>Total Average</b>     |             | <b>63.5</b> | <b>56.8</b> |
| <b>Sustainable</b>       | <b>62.6</b> | <b>62.8</b> | <b>51.8</b> |
| Ghana                    | 88.3        | 69.2        | 61.9        |
| Madagascar               | 57.1        | 33.4        | 54.2        |
| Mali                     | 65.1        | 73.3        | 45.1        |
| Mozambique               | 36.7        | 54.5        | 42.9        |
| Rwanda                   | 93.4        | 85.6        | 69.6        |
| Senegal                  | 53.7        | 56.8        | 41.7        |
| Tanzania                 | 43.9        | 66.9        | 47.5        |
| <b>Non Sustainable</b>   |             | <b>66.3</b> | <b>62.9</b> |
| Zambia                   | 97.1        | 77.2        | 49.6        |
| Uganda                   | 86.9        | 65.8        | 65.9        |
| Niger                    | 30.0        | 95.7        | 93.7        |
| Mauritania               | 96.5        | 75.6        | 72.4        |
| Ethiopia                 | 79.5        | 74.1        | 79.4        |
| Burkina Faso             | n.a         | 50.3        | 41.5        |
| Benin                    | 59.9        | 25.4        | 37.9        |
| <b>Other HIPCs</b>       |             | <b>61.4</b> | <b>55.5</b> |
| Burundi                  | 94.7        | 86.3        | 88.9        |
| Cameroon                 | n.a         | 74.3        | 44.1        |
| Central African Republic | 74.3        | 64.5        | 73.2        |
| Chad                     | 90.8        | 68.0        | 52.4        |
| Congo, Dem. Rep.         | n.a         | 86.6        | 86.3        |
| Congo, Rep.              | 67.4        | 94.5        | 85.8        |
| Cote d'Ivoire            | 77.3        | 50.7        | 60.0        |
| Gambia, The              | 98.9        | 25.6        | 19.0        |
| Guinea                   | n.a         | 61.6        | 59.9        |
| Guinea-Bissau            | 83.5        | 81.6        | 75.2        |
| Liberia                  | 90.6        | 35.9        | 14.6        |
| Malawi                   | 79.5        | 86.5        | 71.0        |
| Sierra Leone             | 52.2        | 17.0        | 26.6        |
| Somalia                  | 87.6        | 56.1        | 41.2        |
| Sudan                    | 87.8        | 27.6        | 28.7        |
| Togo                     | 83.8        | 66.1        | 61.8        |

*Source: Alemayehu 2006 and own computation; based on UNCTAD (1979); UNCTAD (2003), Commodity Yearbook, except for SSA, which is World Bank (2002), World Development Indicators, CD Database.*

Table C3<sup>10</sup>: Uganda Export value (US\$ million dollars) 1998 to 2005.

| Commodity                      | 1998/99       | 1999/00       | 2000/01       | 2001/02       | 2002/03       | 2003/04       | 2004/05       |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <i>Traditional Exports</i>     |               |               |               |               |               |               |               |
| Coffee                         | 306.74        | 186.87        | 109.64        | 85.25         | 105.47        | 114.13        | 144.53        |
| Cotton                         | 10.83         | 22.50         | 14.08         | 18.00         | 16.88         | 42.84         | 41.34         |
| Tea                            | 22.67         | 31.88         | 35.93         | 26.85         | 29.46         | 39.25         | 33.13         |
| Tobacco                        | 22.86         | 22.43         | 27.64         | 32.27         | 39.89         | 36.16         | 36.20         |
| <i>Non-Traditional Exports</i> |               |               |               |               |               |               |               |
| Electricity                    | 12.27         | 13.76         | 16.67         | 13.94         | 15.47         | 12.64         | 8.25          |
| Gold                           | -             | -             | -             | 56.67         | 48.18         | 58.49         | 71.33         |
| Fish (excl. region)            | 47.57         | 18.64         | 50.11         | 80.85         | 83.78         | 88.82         | 121.22        |
| Fish (regional)                | -             | -             | -             | 26.68         | 27.65         | 29.31         | 48.39         |
| Hides & Skins                  | 6.61          | 6.15          | 22.70         | 19.65         | 4.18          | 5.86          | 6.38          |
| Simsim                         | -             | -             | -             | 0.47          | 1.55          | 3.38          | 3.07          |
| Maize                          | 5.89          | 4.01          | 6.13          | 13.07         | 8.16          | 18.76         | 13.29         |
| Beans                          | -             | -             | -             | 1.45          | 5.49          | 4.87          | 4.33          |
| Flowers                        | 7.20          | 8.29          | 13.22         | 15.91         | 17.04         | 27.16         | 31.71         |
| Oil re-exports                 | -             | -             | -             | 7.25          | 11.69         | 34.32         | 33.05         |
| Cobalt                         | -             | 7.34          | 12.78         | 10.95         | 1.92          | 2.69          | 13.70         |
| Others                         | 106.50        | 131.88        | 132.85        | 64.79         | 91.09         | 128.53        | 176.40        |
| <b>Total Traditional</b>       | <b>363.10</b> | <b>263.68</b> | <b>187.29</b> | <b>162.37</b> | <b>191.70</b> | <b>232.38</b> | <b>255.20</b> |
| <b>Total non-trad</b>          | <b>186.04</b> | <b>190.07</b> | <b>254.46</b> | <b>311.68</b> | <b>316.20</b> | <b>414.83</b> | <b>531.12</b> |
| <b>Grand Total</b>             | <b>549.14</b> | <b>453.75</b> | <b>441.75</b> | <b>474.05</b> | <b>507.90</b> | <b>647.21</b> | <b>786.32</b> |
| % of coffee overall            | 55.86         | 41.18         | 24.82         | 17.98         | 20.77         | 17.63         | 18.38         |
| % coffee in traditional        | 84.48         | 70.87         | 58.54         | 52.50         | 55.02         | 49.11         | 56.63         |

Source: Bank of Uganda annual Report (2004/05) and own computation

Table C4: Tanzania's Export performance in million US\$

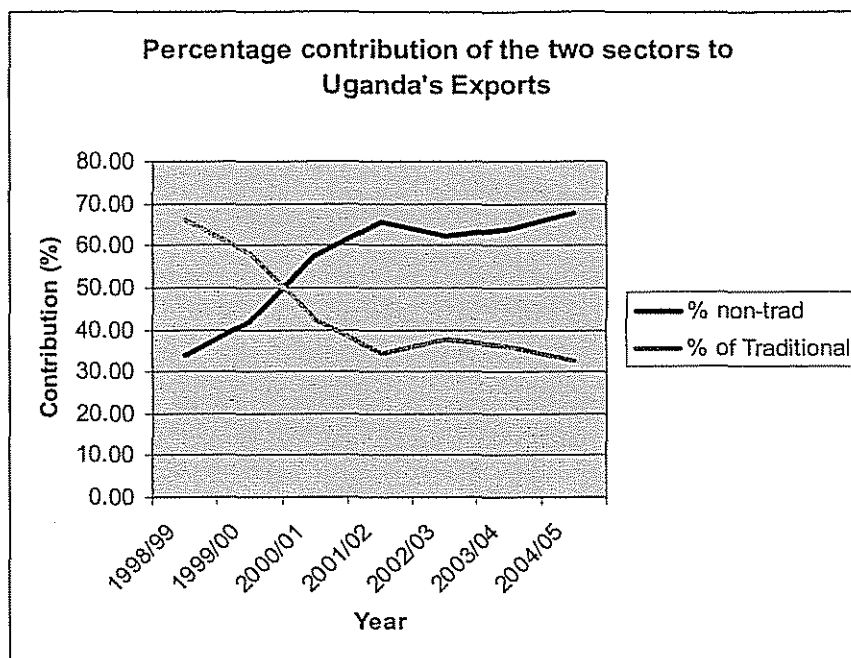
| Exports                   | 2001         | 2002         | 2003          | 2004          | 2005          |
|---------------------------|--------------|--------------|---------------|---------------|---------------|
| Traditional               | 231.1        | 206.1        | 220.5         | 297.8         | 354.5         |
| Non- Traditional          | 620.2        | 773.5        | 995.7         | 1175.3        | 1321.8        |
| o/w Gold                  | 254.1        | 341.1        | 502.8         | 629.4         | 655.5         |
| <b>Total<sup>11</sup></b> | <b>851.3</b> | <b>979.6</b> | <b>1216.1</b> | <b>1473.1</b> | <b>1676.3</b> |

Source: Bank of Tanzania BOP Report for financial year 2005

<sup>10</sup> Absolute figures of exports are different from the World Bank development indicators because of the difference in the rate used to convert to US\$ and the accounting period used but they serve to show the point of diversification.

<sup>11</sup> Figures might vary with World Bank indicators due to difference in the end year period and rates used to convert values to US\$.

Figure C1: Graph showing Uganda's exports in million US\$



Source: Based on table C3 above.

