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**Working Paper**

## Does the HIPC initiative achieve its goal of debt sustainability?

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Discussion Paper No. 2001/100

## **Does the HIPC Initiative Achieve its Goal of Debt Sustainability?**

Bernhard G. Gunter \*

September 2001

### **Abstract**

This paper examines the question if the Heavily Indebted Poor Country (HIPC) Initiative provides a good basis for the HIPCs to exit from repeated debt rescheduling. Building on other reviews of the HIPC Initiative, the paper begins with a short summary of some key problems of the HIPC Initiative. It then reviews critically the growth assumptions of HIPC debt sustainability analyses, whereby the paper examines the changes in (i) public and private capital flows before and after the adoption of the HIPC Initiative, (ii) investment and savings rates, and (iii) sectoral transformations. The last analytical part explores the appropriateness of the HIPC debt sustainability indicators. Before summarizing the main results, the paper makes some suggestions on possible modifications in the HIPC framework that are more likely to provide debt sustainability than the current framework.

Keywords: debt sustainability, structural change, growth

JEL classification: F34, O11, F35

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## **Author's note**

Though the author is currently a consultant in the World Bank's Africa Region, and was an economist in the World Bank's HIPC unit from 1998-2000, this paper is not related to either position and the views expressed here are his own. The views should not be associated to the World Bank, its executive directors, or the countries they represent. Some valuable comments from conference participants are acknowledged. If not otherwise stated, the data is taken from the World Bank's Global Development Finance 2001.

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## 1 Introduction

Today, it is a well-known fact that unsustainable debt has a negative impact on investment, growth, and development; the so-called debt-overhang effect. The empirical evidence provided since the early 1990s for a debt overhang in many of the poorest and highly indebted countries has led—though with considerable delay—to the adoption of the Heavily Indebted Poor Country (HIPC) Initiative in fall 1996.<sup>1</sup> Compared to earlier decades of bilateral debt rescheduling, the original framework of the HIPC Initiative was a major break-through, mainly due to the HIPC Initiative's key goal to reduce the debt of the poorest countries to a level that would allow them to permanently exit the process of repeated debt rescheduling.

However, three years after launching the HIPC Initiative, it was clear that the original HIPC framework was not a sufficient solution for many poor countries to reach debt sustainability. Largely due to public pressure, IMF and World Bank agreed in September 1999 to enhance the HIPC framework. The enhancements provide broader, deeper and faster debt relief mainly through (i) a lowering of the ratios considered to provide debt sustainability (together with a lowering of the minimum thresholds to qualify for the openness/fiscal criteria), (ii) replacing the principally fixed three-year period between decision and completion points by the concept of a floating completion point, and (iii) the provision of interim relief from some creditors between the decision point and the completion point. Another key enhancement was to link HIPC debt relief to the preparation of country-owned poverty reduction strategies.

Nevertheless, there remain many problems with the enhanced HIPC Initiative. First of all, evidence is once again mounting that even the enhanced HIPC framework does not provide long-term debt sustainability for many of the poorest countries, mainly because (i) its growth assumptions are considered too optimistic, (ii) its debt sustainability analysis inappropriate, and (iii) its country selection too narrow. For example, in spring 2000, the United States General Accounting Office (GAO 2000) concluded that the HIPC Initiative might not provide a lasting exit from debt problems, unless strong and sustained economic growth is achieved. The report cautions that the growth assumptions used by IMF and World Bank staff for the country-specific debt sustainability analyses (DSAs) may be overly optimistic.<sup>2</sup>

Recognizing the possibility that the HIPC Initiative may not achieve debt sustainability, the IMF and World Bank have recently issued a paper on the challenge of maintaining long-term debt sustainability.<sup>3</sup> The paper emphasizes the importance of establishing an environment conducive to growth and poverty reduction, particularly in the areas of macroeconomic policies, structural reforms, public sector management, governance and social inclusion. It also notes that HIPCs are typically dependent upon a narrow export base, which makes them vulnerable to externally induced shocks. It examines the sensitivity of long-term debt sustainability to possible shortfalls in export revenues and

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<sup>1</sup> The theoretical rationale for the negative impact of a debt overhang on investment and growth have been provided by the seminal contributions by Sachs (1989) and Krugman (1988); for a listing of the early empirical studies, see Gunter (forthcoming).

<sup>2</sup> For example, IMF and World Bank assume that export earnings will grow in excess of 9 per cent every year for 20 years in four of the seven HIPCs the GAO analysed (GAO 2000: 9).

<sup>3</sup> IMF and World Bank (2001).

less concessional financing than assumed in the DSAs, yet, the paper does not assess the likelihood of these and other factors influencing growth prospects. Without addressing the broad critique of possibly overly optimistic growth rates,<sup>4</sup> the paper concludes that the HIPC Initiative provides a good basis for HIPCs to exit from future debt rescheduling.

As reviewed in more detail in Gunter (forthcoming), other major critiques to the enhanced HIPC Initiative can be grouped into overall problems with the HIPC framework and specific problems related to HIPC debt relief. Overall problems of the HIPC framework are that (i) developing countries' suggestions have not been taken serious enough, (ii) the initiative's burden sharing is unrelated to economic power, (iii) the HIPC Initiative is confronted with major financing problems, some of which have been pushed to deal with in the future, (iv) the anticipation of HIPC eligibility is likely to defer traditional development assistance, and (v) discounts rates are used inappropriately and inconsistently. Given that all of these problems have been mentioned in one way or the other in the extensive HIPC review undertaken before the adoption of the enhanced framework, a broader discussion of the various suggestions could have avoided many of the current problems. More specific, but equally crucial problems are that HIPC debt relief is (i) not calculated based on a country's need for sustainable development, (ii) likely to be deducted from traditional development assistance, (iii) unnecessarily delayed by the adoption and implementation of poverty reduction strategies, and (iv) partly delivered through debt rescheduling.

## **2 Growth assumptions of HIPC DSAs**

Table 1 shows the actual growth rates in real GDP and the projected real growth rates assumed in HIPC DSAs of the 22 countries that had reached the enhanced decision point by December 2000. Based on the experience of the 1990s and without analysing the growth projections further, some projections seem realistic (i.e., for Uganda and Mozambique), however, most projections seem highly unrealistic. Considering world history, any long-term real GDP growth rate of more than 6 per cent is highly exceptional. It seems unlikely that Mauritania, Guinea-Bissau, Madagascar, and Rwanda will repeat what has been known as the East Asian miracle. The average growth rates for 2000-10, assumed for the first 22 enhanced decisions-point countries, are 5.5 per cent for real GDP and 8.6 per cent for exports (expressed in nominal US dollars, ranging from 4.4 per cent for Guyana to 13.7 per cent for Rwanda).

Too optimistic growth rates affect the HIPC framework's debt sustainability in two ways: first, they imply too optimistic growth rates of a country's exports, and second, they underestimate a country's future financing needs. Overestimations of exports (which are in the denominator of the ratio) and underestimations of future financing needs/new debt (which are in the nominator of the ratio) result in highly unrealistic low future debt-to-export ratios, which then indicate unrealistic long-term debt sustainability. As the GAO (2000: 15) report points out, if Tanzania's exports grow at an annual 6.5 per cent (instead of the 9 per cent projected by the IMF and World Bank),

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<sup>4</sup> For example, even the World Bank (2001a: 102) has cautioned that the projected growth rates may not be realistic.

Tanzania's debt-to-export ratio could be more than twice of what the IMF's and World Bank's forecast shows for the projection period.

At a more general level, the impact of various levels of export growth rates on long-term debt-to-export ratios are illustrated in Figure 1, showing the paths of NPV debt-to-export ratios of export growth rates of 5 per cent, 7 per cent, and 9 per cent. Note that we keep the NPV debt constant in all three cases. Thus, the reductions in NPV debt-to-export ratios are simply due to growth in exports. Comparing these NPV debt-to-export ratios with the projections as they can be found in most HIPC documents, it becomes clear that most of the projected NPV reductions are not due to HIPC debt relief, but due to optimistic export growth rates.

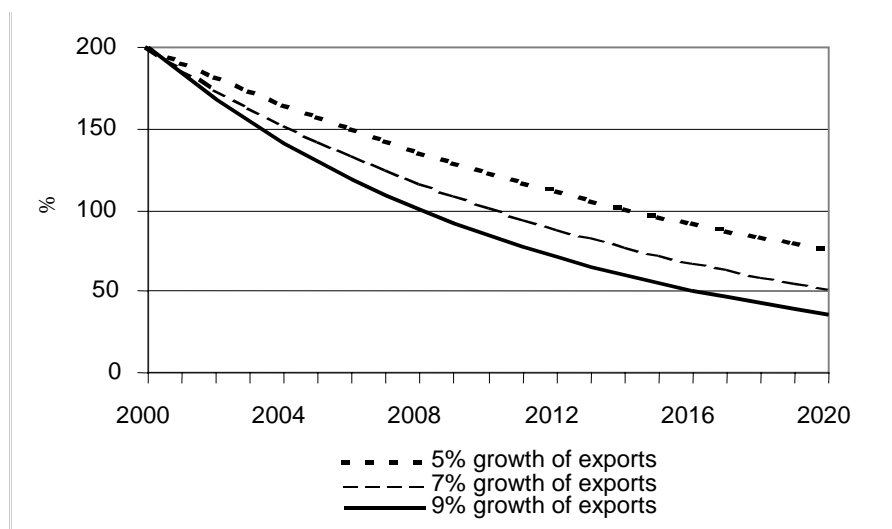
Table 1  
Real GDP growth, 1990-99 and 2000-10

	Real GDP growth, 1990-99 average	GDP growth, 2000-10, HIPC DSA assumptions	Difference in percentage points
Mauritania	4.3	7.3	3.0
Guinea-Bissau	0.3	7.0	6.7
Madagascar	1.8	6.2	4.4
Rwanda	-1.6	6.1	7.7
Cameroon	1.2	6.0	4.8
<b>Mozambique</b>	<b>6.3</b>	<b>5.9</b>	<b>-0.4</b>
Honduras	3.2	5.9	2.7
Burkina Faso	3.6	5.9	2.3
Tanzania	3.1	5.9	2.8
Gambia, The	3.0	5.6	2.6
<b>Uganda</b>	<b>6.7</b>	<b>5.6</b>	<b>-1.1</b>
Nicaragua	2.6	5.6	3.0
<b>Benin</b>	<b>4.3</b>	<b>5.5</b>	<b>1.2</b>
Guinea	3.9	5.3	1.4
Bolivia	4.1	5.3	1.2
Zambia	1.0	5.2	4.2
Senegal	3.0	5.0	2.0
Mali	3.4	5.0	1.6
Malawi	4.0	4.4	0.4
Niger	2.4	4.4	2.0
<b>Guyana</b>	<b>6.0</b>	<b>4.2</b>	<b>-1.8</b>
Sao Tome & Principe	-0.5	4.1	4.6

Source: IMF and World Bank (2001: Table 5)



Figure 1  
Evolution of NPV debt-to-export ratios  
with zero NPV debt reduction



Today, the international community understands better than ever what the sources of economic growth are: macroeconomic stability, increases in labour participation rates, investments in physical and human capital, increasing saving rates and financial market development, openness to trade and investment, and a political system that provides for human rights and freedom, effective governance, and increasing democratization.<sup>5</sup> Furthermore, there are also a couple of African-specific growth analyses that emphasize the role of a hostile internal and external environment (ethnic diversity, lack of social capital, particularly dysfunctional government, limited trade openness, conflict and slow growth in neighbouring countries).<sup>6</sup> Finally, there is a large literature that stresses that sustainable growth can only be achieved if the economy undergoes a structural transformation, which results in export-led growth in manufactures.<sup>7</sup> Based on this background, we look at four aspects that can shed some light on future growth prospects of HIPC: (i) changes in capital inflows, (ii) changes in investment and savings ratios, (iii) an economy's structural transformation, and (iv) implications of AIDS, climate change, and armed conflict.

<sup>5</sup> Until recently, the new growth literature was a collage of theoretical and empirical studies, many of them stressing the importance of one or a few sources of growth. Furthermore, there were some influential studies suggesting that most of the high growth experiences were due to a rapid accumulation of labour and capital (either physical capital or human capital, or both). See Krugman (1994) and Young (1995). However, over the last few years, evidence has been mounting that the accumulation of labour and capital do not explain the huge differences in growth experiences across countries. Instead, attention has been shifting towards the residual representing total factor productivity. For example, see Easterly and Levine (2000) and Senhadji (2000).

<sup>6</sup> See Branson, Guerrero and Gunter (forthcoming) for a list of empirical growth analyses for Sub-Saharan Africa.

<sup>7</sup> For example, see Sachs *et al.* (1999: 12). For further references, as well as for an assessment of the role of capital accumulation and adjustment, see Berthélemy and Söderling (2001).

## 2.1 Capital flows before and after the HIPC Initiative

In this section, we look at various capital flows before and after the adoption of the HIPC Initiative for two reasons. First, certain increases in capital flows could be viewed as indicators for a country's debt sustainability, and second, changes in the amount and composition of capital flows have direct implications on a country's debt sustainability. Both factors are related to the fact that the growth prospects of HIPCs will continue to depend crucially on future foreign capital inflows. In this regards, most observers agree that a necessary condition for the success of the HIPC Initiative is that debt relief should be additional to the existing resource transfers.<sup>8</sup> Previous analyses found little evidence of additionality with regards to the resource transfers to HIPCs.<sup>9</sup> Based on the latest data generally available, we compare various capital flows during the three years before and after the adoption of the HIPC Initiative, i.e., we compare capital flows of 1994-96 with those of 1997-99. We first look at private non-guaranteed capital flows, then at official capital flows, and finally at private but publicly guaranteed capital flows.

### 2.1.1 *Changes in private non-guaranteed capital flows*

The formal adoption of the HIPC Initiative in fall 1996 could have been a positive signal for the future prospects of HIPCs, and given that private non-guaranteed debt is excluded from HIPC debt relief, we could have expected an overall increase in private non-guaranteed capital inflows to HIPCs after the adoption of the HIPC Initiative, or at least after a country reached its decision or completion point. However, the overall picture in this regard is quite dim.

First, the total disbursement of non-guaranteed debt to the group of HIPCs decreased from more than US\$1.54 billion<sup>10</sup> during 1994-96 to less than US\$1.39 billion during 1997-99. Excluding Bolivia, disbursements of commercial banks to the group of HIPCs decreased from US\$1.1 billion during 1994-96, to US\$0.85 billion during 1997-99, even though disbursements of commercial banks to Sub-Saharan Africa increased during the same time from US\$1.98 billion to US\$3.04 billion. Second, while the group of HIPCs received a marginal US\$250 million in disbursements of private non-guaranteed bonds during 1994-96, no such bonds were issued during 1997-99. The only positive trend in private capital flows to the group of HIPCs is with regards to net flows of foreign direct investment (FDI), which have increased by US\$8 billion (from US\$13 billion during 1994-96, to US\$21 billion during 1997-99), though about US\$5 billion of this increase was due to sharp increases in FDI to Angola and Bolivia.

We now look at the changes in private capital inflows to the four HIPCs (Uganda, Bolivia, Burkina Faso, and Guyana) that have—due to their good track record—been the first countries reaching the decision point under the original framework of the HIPC Initiative in 1997. These four HIPCs have been outstanding performers in terms of macroeconomic policies and structural reforms for many years, which justified their

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<sup>8</sup> See UNCTAD (2000).

<sup>9</sup> For example, see the Concluding Report of the November 2000 Bretton Woods Committee Roundtable Discussion on Reassessing Debt Relief (available at: [www.brettonwoods.org](http://www.brettonwoods.org)), which states that roundtable participants, including Bank and Fund officials, were discouraged that at an early stage, little evidence of additionality could be found.

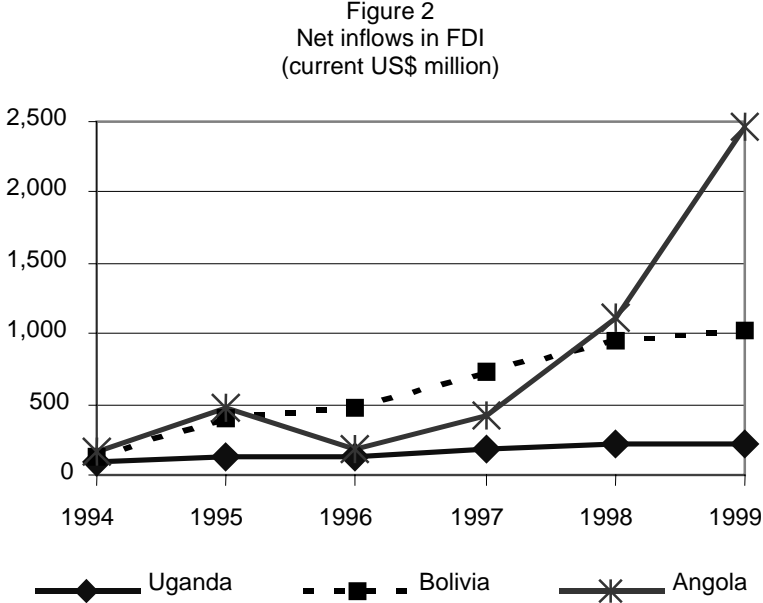
<sup>10</sup> We use the US definition, whereby one billion is thousand millions: 1.5 billion is 1,500 million.

original HIPC decision points in 1997. Uganda and Bolivia even reached their completion points under the original HIPC framework in 1998.

Though Uganda was unable to attract any private capital flows in terms of non-guaranteed loans or bonds, it was successful in attracting some foreign direct investment, whereby the net inflows increased steadily from US\$88 million in 1994 to over US\$220 million in 1999. However, compared to Angola, where net inflows of FDI increased during the same period from US\$170 million to over US\$2,470 million, Uganda’s increase looks pale (see Figure 2).

Bolivia also shows a steady increase in net inflows in FDI. However, new disbursements of private non-guaranteed loans by commercial banks to Bolivia decreased after reaching its first decision point under the HIPC Initiative (see Figure 3). Bolivia was also unable to receive any private non-guaranteed bonds.

The trends of private capital flows to Burkina Faso and Guyana are even more disappointing. Not only did neither country receive any disbursement of private non-guaranteed loans<sup>11</sup> or bonds, their net inflows of FDI decreased after reaching their first decision points under the HIPC Initiative (see Figure 4).



<sup>11</sup> With exception that Guyana received a marginal US\$27 million from a semi-commercial bank in 1999.

Figure 3  
Private non-guaranteed disbursements of commercial banks  
(in current US\$ million)

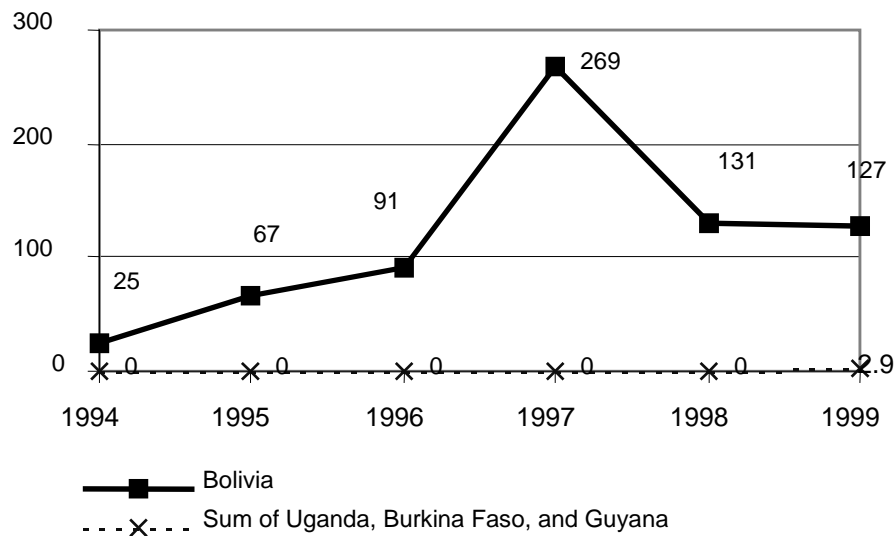
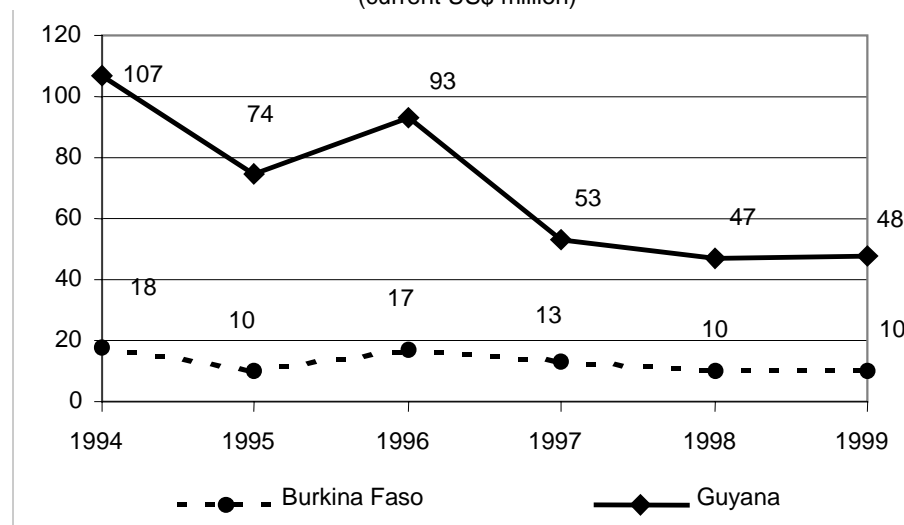


Figure 4  
Net inflows in FDI  
(current US\$ million)



### 2.1.2 Changes in official capital flows

As Figure 5 shows, disbursements of public and publicly guaranteed (PPG) debt to the group of HIPCs have been decreasing since 1995, even though they increased sharply for the group of non-HIPC low-income countries from 1996-98. Note that the decrease to the group of HIPCs would be even worse if the data would be expressed in real terms. It is also interesting to look at the longer-term developments among these two groups: note that until 1986, disbursements to HIPCs have been higher than disbursements to low-income countries excluding HIPCs, but consistently lower since 1987.

We next look at the same flows after excluding disbursements from the IMF, whereby we concentrate on the period of 1994-99, reflecting three years (1994-96) before and three years (1997-99) after the adoption of the HIPC Initiative. Figure 6 shows that after excluding disbursements from the IMF, the decline in disbursements of PPG debt to the group of HIPCs happens two years later. In other words, the IMF has started earlier than other official creditors to decrease its disbursements to the group of HIPCs. However, there still remains a decrease in disbursements to the group of HIPCs from 1997 to 1998 and again from 1998 to 1999, even though disbursements increased sharply for the group on non-HIPC low-income countries from 1997-98 and decreased less from 1998-99. In real terms (using the SDR interest rate as discount rate), the 1997-99 average disbursements of official creditors excluding the IMF to the group of HIPCs have been 18 per cent lower than the 1994-96 average disbursements.

Figure 5  
Disbursements on public and publicly guaranteed (PPG) debt by official creditors, including IMF  
(in current US\$ million)

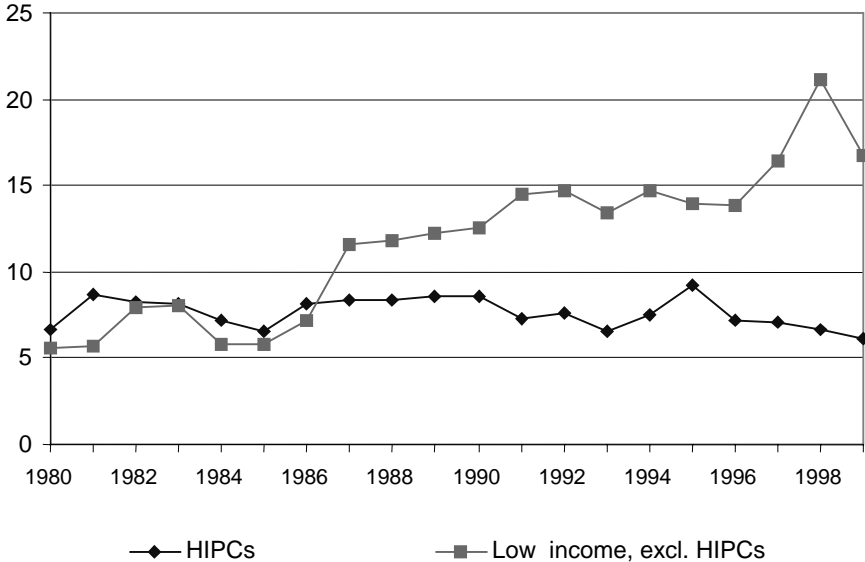


Figure 6  
Disbursements on public and publicly guaranteed (PPG) debt by official creditors, excluding IMF  
(in current US\$ million)

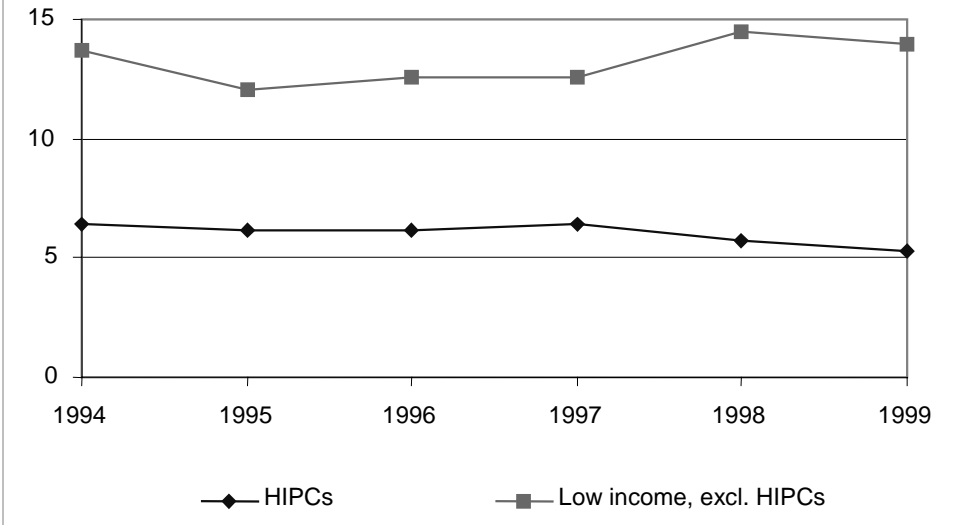
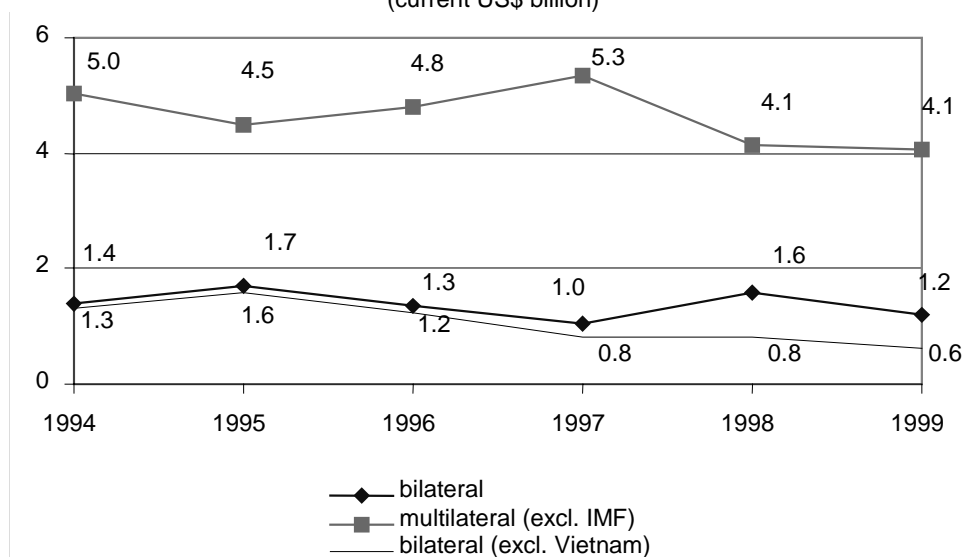


Figure 7  
Bilateral and multilateral disbursements to the group of HIPCs  
(current US\$ billion)



We can further differentiate official disbursements between bilateral and multilateral creditors, which are shown in Figure 7. It shows that within the last six years, disbursements from multilateral creditors reached a maximum in 1997, followed by a relatively sharp decrease of more than 22 per cent in nominal terms in 1998. For disbursements from bilateral creditors, the maximum of the last six years was reached in 1995, followed by two reductions of about 20 per cent per year, a near recovery of bilateral disbursements to 1995 levels in 1998, and a subsequent reduction in 1999. However, please note that the only reason for the near recovery of bilateral disbursements in 1998 was due to a sharp increase in bilateral disbursements to Vietnam, which increased—related to the Asian Crisis—from US\$216 million in 1997 to over US\$775 million in 1998. Excluding Vietnam, there is a steady decline in bilateral disbursements to the group of HIPCs since 1995.

What makes these overall negative trends worse is that even concessional disbursements, especially bilateral concessional disbursements, have decreased and as will be shown below, that this picture remains valid even after including grants. As Table 2 shows, the percentage reduction in bilateral concessional disbursements from the 1994-96 average to the 1997-99 average was more than 15 per cent in nominal terms.

Given that HIPC debt relief is calculated based on each creditor's share in NPV debt, these reductions in disbursements to HIPCs are quite rational from each creditor's point of view. However, from an overall welfare perspective, these reductions in debt flows to HIPCs are not rational, as they are likely to reduce the growth potentials of HIPCs and thus undermine their long-term debt sustainability. Hence, the situation is a typical 'prisoner's dilemma' where rational behaviour of each creditor leads to a sub-optimal macro outcome.

The next question we want to analyse is what the trends of public and publicly guaranteed disbursements were for the four HIPCs, which have reached their original decision points in 1997. We first compare the bilateral disbursements during the years

directly before the adoption of the HIPC Initiative with the bilateral disbursements of the early 1990s. Given that under the original framework, each bilateral creditor's share in HIPC debt relief was fixed according to its share of NPV debt at the decision point DSA, the hypothesis is that bilateral disbursements to 1997 decision point HIPCs decreased shortly before the decision point in order to minimize the costs of the HIPC Initiative. Indeed, as Table 3 shows, the disbursements to Uganda, Bolivia, Burkina Faso and Guyana have all been reduced sharply (and beyond the reduction to the group of HIPCs) in the three years before their decision points, even though bilateral disbursement to other (non-HIPC) low-income countries remained nearly the same.

Table 2  
Average disbursements of concessional debt to the group of HIPCs

	Average (current US\$, billion)		Percentage change from 1994-96 to 1997-99
	1994-96	1997-99	
Bilateral concessional	1.32	1.12	-15.12
Multilateral concessional	4.02	3.95	-1.84

Source: World Bank (2001a).

Table 3  
Bilateral disbursements, 1990-96  
(current US\$ million, if not noted otherwise)

	Average		Percentage change from 1990-93 to 1994-96
	1990-93	1994-96	
Uganda (04/97)	68.1	28.6	-57.9
Bolivia (09/97)	96.8	56.3	-41.8
Burkina Faso (09/97)	33.5	8.3	-75.2
Guyana (12/97)	20.1	1.8	-90.9
HIPCs	2,478.1	1,476.9	-40.4
Low-income countries, excl. HIPCs	5,665.7	5,572.6	-1.6

Source: World Bank (2001a).

Second, we compare the average bilateral disbursements during the years before and after the adoption of the HIPC Initiative (1994-96 vs. 1997-99). The two alternative hypotheses are the following:

- a) As long as bilateral creditors believe that the HIPC Initiative provides debt sustainability, they have no reason to continue shifting disbursements from decision point HIPCs to other countries that are not covered under the HIPC Initiative.
- b) However, if bilateral creditors believed that the original HIPC Initiative did not provide an exit from future debt rescheduling, they would continue to shift disbursements from HIPC decision point countries to non-HIPCs, even after reaching the decision point.

Though there may be other explanations, the data provided in Table 4 seem to generally support the hypothesis that bilateral creditors did not believe that the original HIPC Initiative would provide a lasting exit from future debt rescheduling. Furthermore, given that the original HIPC framework allocated the multilateral costs of HIPC debt relief

according to multilateral shares at the completion point DSA, we can compare multilateral disbursements before and after the completion point DSAs. Given that (a) both Uganda and Bolivia reached their completion point in 1998, with the completion point DSA based on 1997 debt data, and (b) multilateral disbursements to low income countries other than HIPC countries increased during 1998-99, compared to the 1994-97 average, we should also have expected an increase in multilateral disbursements to Uganda and Bolivia. However, as Table 5 shows, this was not the case. Again, while there may be other explanations, the data support the hypothesis that multilateral creditors did not believe that Uganda and Bolivia would have achieved debt sustainability after reaching the completion point under the original HIPC framework.<sup>12</sup>

One possible explanation for these declining trends in official disbursements to HIPC countries, and especially to the early decision point HIPC countries, could be that donors shifted from loans to grants. We thus look shortly also at changes in grants provided to HIPC countries. The usual distinction made is between grants excluding technical cooperation and technical cooperation grants. To make a long story short, both categories of grants provided to the group of HIPC countries during 1997-99 decreased compared with the three years before the adoption of the HIPC Initiative (1994-96): grants excluding technical cooperation decreased by more than 16 per cent (from an average US\$9.4 billion during 1994-96 to an average US\$7.8 billion during 1997-99); technical cooperation grants decreased by more than 18 per cent (from an average US\$3.8 billion during 1994-96 to an average US\$3.1 billion during 1997-99). Looking at the four HIPC countries which reached their first decision points in 1997, the annual average of total grants before the decision point (1994-97) also decreased compared with the annual average of total grants after reaching the decision point: Uganda's average decreased by 0.2 per cent, Bolivia's decreased by more than 22 per cent, Burkina Faso's decreased by 8.8 per cent, and Guyana's decreased by 9.5 per cent. Note again that all these flows are in nominal terms, thus, in real terms, the reductions are much larger.

Table 4  
Bilateral disbursements, 1994-99  
(current US\$ million, if not noted otherwise)

	Average		Percentage change:	
	1994-96	1997-99	1994-96 to 1997-99	1990-93 to 1997-99
Uganda (04/97)	28.6	6.7	-76.6	-90.2
Bolivia (09/97)	56.3	35.2	-37.6	-63.7
Burkina Faso (09/97)	8.3	7.5	-9.2	-77.5
Guyana (12/97)	1.8	7.3	296.4 <sup>(a)</sup>	-63.8
HIPCs	1,476.9	1,273.8	-13.4	-48.4
Low-income countries, excl. HIPCs	5,572.6	6,470.3	16.1	14.2

Note: <sup>(a)</sup> Guyana's tripling of disbursements has to be seen in relationship to the earlier cuts in disbursements; compared to the early 1990s, disbursements to Guyana are still low.

Source: World Bank (2001a).

<sup>12</sup> While it is too early to analyse the implications of the enhanced HIPC initiative, the decisions taken on the delivery of enhanced HIPC debt relief seem to indicate that bilateral and multilateral creditors are still unconvinced that the enhanced HIPC initiative provides a lasting exit from future debt rescheduling.



Table 5  
Disbursements to Uganda and Bolivia  
before and after reaching their completion points <sup>(a)</sup>

	Average (current US\$ million)		Percentage change %
	1994-97	1998-99	
Disbursements of multilateral creditors, excluding IMF			
Uganda (04/97; 04/98))	230.8	169.4	-27
Bolivia (09/97; 09/98)	329.7	245.8	-25
HIPCs	4,918	4,109	-16
Disbursements of official creditors, excluding IMF			
Uganda (04/97; 04/98))	254.7	174.6	-31
Bolivia (09/97; 09/98)	375.4	291.6	-22
HIPCs	6,287	5,504	-12
Disbursements of official creditors, including IMF			
Uganda (04/97; 04/98))	312.5	217.2	-31
Bolivia (09/97; 09/98)	410.7	325.9	-21
HIPCs	7,170	6,406	-11

Note: <sup>a</sup> Though both countries reached their completion point under the original framework of the HIPC Initiative in 1998, the completion point DSAs are based on is the 1997 debt data.

Source: World Bank (2001a).

### 2.1.3 *Changes in private capital flows that are publicly guaranteed*

For reasons of completeness, we finally look shortly at disbursements of private debt that are publicly guaranteed. Within the group of HIPCs, private debt that is publicly guaranteed is highly concentrated among a few countries: Angola, Ghana, Kenya, and Vietnam. In 1999, more than 68 per cent of the private publicly guaranteed debt disbursed to the group of HIPCs went to Angola (US\$875 million), and more than 28 per cent went to Ghana, Kenya, and Vietnam (US\$359 million). Excluding Angola, the 1998-99 average of disbursements to the group of HIPCs was nearly half of the average disbursements during 1994-97. For the same periods, average disbursements to Bolivia decreased by 20 per cent (from US\$6.1 million to US\$4.9 million), new disbursement to Guyana ceased (compared to an average US\$2.4 million during 1994-97), and neither Uganda nor Burkina Faso received any disbursement of private debt (either public guaranteed or non-guaranteed) during 1994-99.

### 2.1.4 *Conclusion on changes in capital flows to HIPCs*

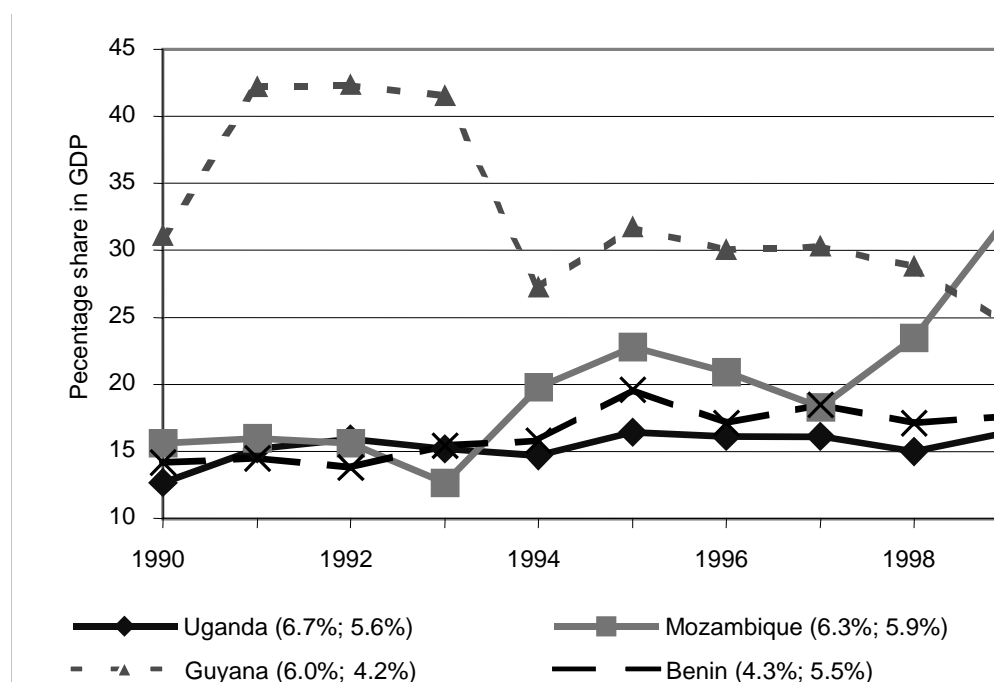
Combining the various results so far, there is some indication that (i) the adoption of the HIPC Initiative led to a reduction in disbursements to HIPCs, (ii) HIPC debt relief has been deducted from traditional development assistance, (iii) foreign direct investment flows to HIPCs are largely concentrated to a few countries and unrelated to a country's debt sustainability, and (iv) the already marginal private capital flows to HIPCs generally continue to be decreasing. Given that overall development budgets are generally decreasing in real terms and that private creditors and investors also face constraints from a slowing world economy, it is to expect that this negative tendency of changes in capital flows to HIPCs might continue. In other words, HIPCs could end up with no additional resources for poverty reduction.

## 2.2 Changes in investment and savings ratios

In this sub-section, we first review the implications of the long-term changes in investment and savings ratios on the growth sustainability of the four HIPCs with the highest growth rates of real GDP. We then look at the implications of the most recent changes in investment and savings ratios on the growth prospects of the four HIPCs that are expected to grow most during 2000-10. The four HIPCs that grew most during the last decade were Uganda (6.7 per cent), Mozambique (6.3 per cent), Guyana (6.0 per cent) and Benin (4.3 per cent).<sup>13</sup> The changes in investment and savings ratios of these four countries over the last decade are shown in Figures 8 and 9, respectively.

The DSAs' average annual growth assumptions of real GDP for these four countries during 2000-10 are 5.6 per cent for Uganda, 5.9 per cent for Mozambique, 4.2 per cent for Guyana, and 5.5 per cent for Benin. Note that the growth assumptions for Uganda, Mozambique and Guyana are lower than what these three HIPCs achieved in the last decade, but higher for Benin (4.3 per cent versus 5.5 per cent). Looking at Figures 8 and 9, there are some indications for the lower growth projections for Uganda and especially for Guyana. On the other hand, neither the recent trends nor the levels of Benin's investment and savings rates justify its higher growth assumptions (which is even higher than that of Guyana and nearly equal to that of Uganda and Mozambique).

Figure 8  
Gross domestic investment, 1990-99



<sup>13</sup> Mauritania also grew at an average 4.3 per cent during the 1990s, but is analysed in the group of four HIPCs, which are supposed to grow most during 2000-10.

Figure 9  
Gross domestic savings, 1990-99

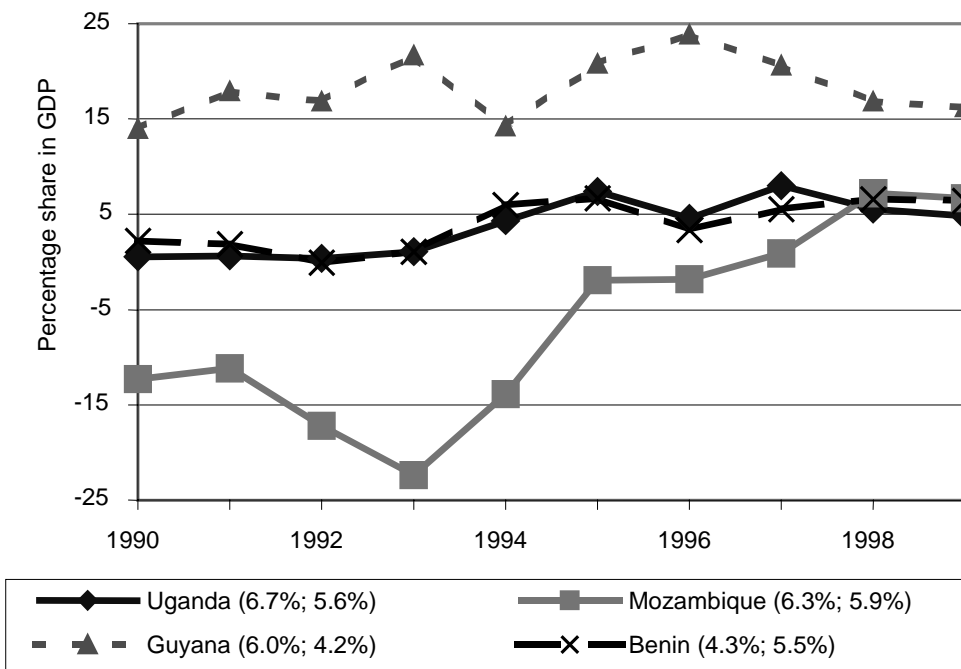


Figure 10  
Gross domestic investment, 1990-99

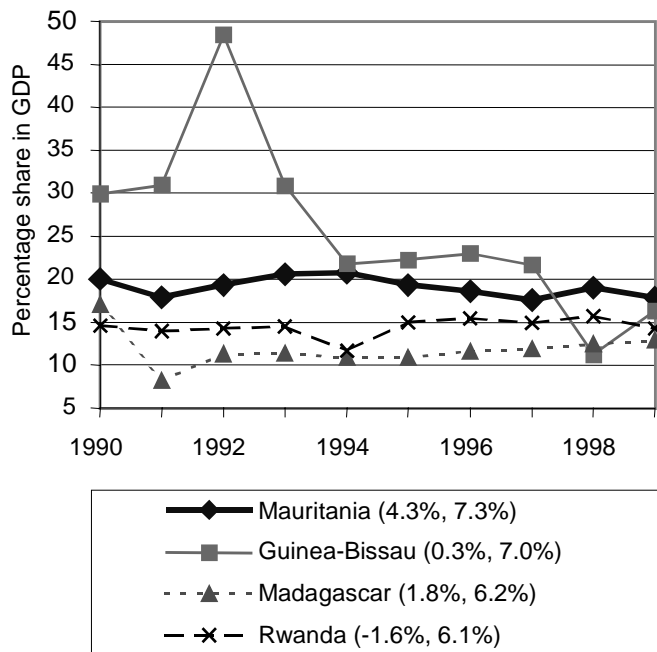
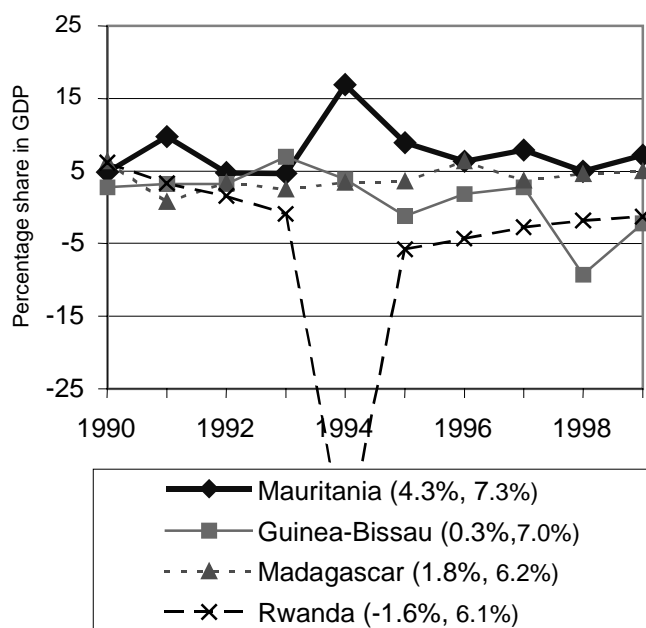


Figure 11  
Gross domestic savings, 1990-99



The picture is even worse for the four countries which are expected to grow most during 2000-10: Mauritania (7.3 per cent), Guinea-Bissau (7.0 per cent), Madagascar (6.2 per cent) and Rwanda (6.1 per cent), whereby we concentrate on the most recent trends (1997-99) of the investment and savings ratios to check if there is some indication for the high growth assumption of more than 6 per cent (see Figures 10 and 11). Mauritania's investment ratios are stagnating and its savings ratios have declined during the last three years (1997-99). Guinea-Bissau's investment and savings ratios were lower in 1999 than in 1997, Madagascar's savings and investment ratios have only marginally improved during the last three years (1997-99), Rwanda's investment ratio has been lower in 1999 than it was in 1997 and its savings ratios have remained negative since 1993. Please see Appendix Table for the graphical illustrations of the investment and savings ratios as well as the structural transformations of all 22 HIPCs that reached the enhanced decision point by end-December 2000, with further information on the data sources.

### 2.3 Structural transformation

A similar picture emerges from looking at the structural transformation of the four high growth HIPCs of the 1990s (see Figure 12). While Uganda and especially Mozambique show a positive structural transformation, Guyana's and Benin's structural transformations have stagnated for the last seven years. Furthermore, given that there is usually no advantage of structural backwardness, looking at the levels of manufacturing shares in GDP, it seems unlikely that Benin will be able to achieve the assumed growth rates.

Finally, looking at the relatively stagnant structural transformation during the last three years of Mauritania, Guinea-Bissau, Madagascar, and Rwanda (see Figure 13), there is no structuralist foundation for the highly optimistic growth rates of more than 6 per cent for these four countries.

Figure 12  
Structural transformation, 1990-99

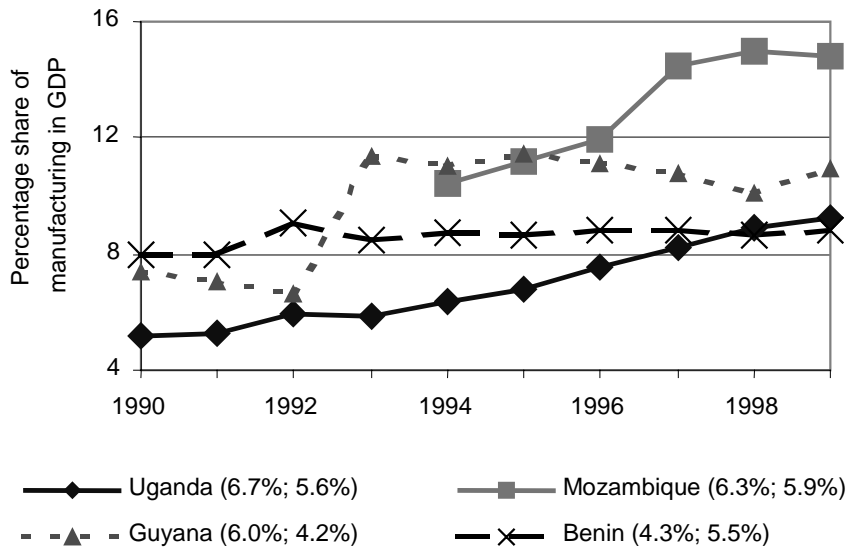
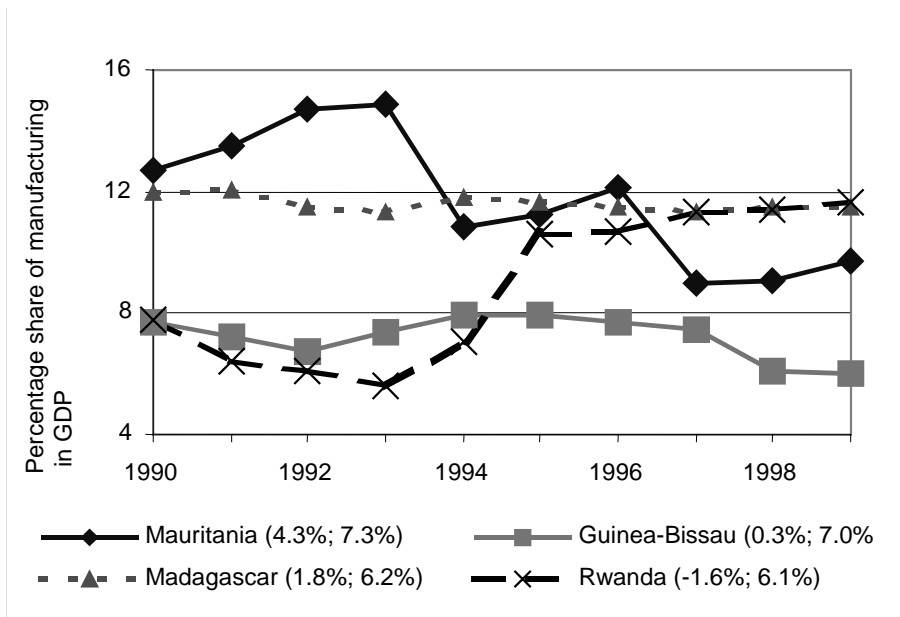


Figure 13  
Structural transformation, 1990-99



## 2.4 AIDS, climate changes, and armed conflicts

The IMF and World Bank (2001: 7) study mentions that ‘longer-term growth prospects can be undermined by natural disasters, war or health threats such as the AIDS epidemic affecting many of the HIPC’s’. However, the report fails to analyse the impacts of these factors on growth. It also fails to recognize that these factors are not only possibilities but also realities. A factor that is not reality yet, but which Lindert and Williamson (2001) have called a ticking bomb is possible south-north mass migration, especially out

of Africa,<sup>14</sup> which would also have a negative impact on the nominal growth rate of southern exports. A further possibility is that the terms of trade will continue to show a long-term negative trend, while most DSA assumptions are that HIPC's terms of trade will recover.

With regards to AIDS, current estimates of economic impacts translate to annual reductions in real GDP growth rates between 0 and 3 percentage points, depending on a country's HIV prevalence (ranging up to 35.8 per cent at end-1999 in the case of Botswana).<sup>15</sup> Note that losses in annual per capita growth are much lower since many of the infected people are assumed to die. In the words of a recent World Bank (2000: 9) AIDS study:

The illness and impending death of up to 25 per cent of all adults in some countries will have an enormous impact on national productivity and earnings. Labour productivity is likely to drop, the benefits of education will be lost, and resources that would have been used for investments will be used for health care, orphan care, and funerals. Savings rates will decline, and the loss of human capital will affect production and the quality of life for years to come.

Obviously, all these impacts will also affect the HIPC's export growth rates, which are the key debt sustainability indicator within the HIPC framework.

With regards to natural disasters, the number of hydro-meteorological disasters has more than doubled over the second half of the last decade. In 2000, the International Federation of Red Cross and Red Crescent Societies (IFRC) registered 752 natural disasters, versus 609 in 1999 and 481 in 1998.<sup>16</sup> Predictions are that this trend is likely to accelerate,<sup>17</sup> whereby agricultural production in many tropical and subtropical countries, especially in Sub-Saharan Africa and Latin America (hence mostly in HIPC's) is likely to decrease. Furthermore, even less dramatic weather changes can have significant impacts on export growth. For example, Uganda's reassessment under the enhanced HIPC Initiative has shown that the projections on NPV debt and exports made in Uganda's original completion point document were too optimistic.<sup>18</sup>

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<sup>14</sup> See Hatton and Williamson (2001).

<sup>15</sup> See IMF Survey of November 6, 2000, which reports that for Swaziland (which had an HIV prevalence rate of 25 per cent at end-1999) the IMF staff estimates that, by 2010, the rate of GDP growth will be about 2 per cent lower than it would be if Swaziland were not experiencing an AIDS epidemic.

<sup>16</sup> For the IFRC, a disaster means that at least 10 people died, 100 people were affected, and a state of emergency was declared or international aid sought; see Reuters Business Briefings, June 28, 2001.

<sup>17</sup> See the United Nations' third assessment on climate change of July 2001 which states that global temperatures are rising nearly twice as fast as previously thought; see also the recent statements by Robert Watson, World Bank Chief Scientist and Chairman of the Intergovernmental Panel of Climate Change.

<sup>18</sup> As reported in Uganda's enhanced decision point document of January 2000 (available on the HIPC website: [www.worldbank.org/hipc](http://www.worldbank.org/hipc)) lower commodity prices and adverse weather conditions caused an unexpected decrease of exports of nearly 25 per cent in fiscal year 1998.

With regards to war and civil conflicts, it is unlikely to assume that all these internal and external conflicts will cease after having reached the HIPC decision or completion points.<sup>19</sup> Given that these conflicts have generally a devastating impact on growth, especially if prolonged, realistic growth projections need to account for the economic impact of such conflicts. For example, though it was already known in December 2000 that Guinea's growth rate for 2000 would be less than two per cent due to the armed conflict at its southern borders, the December 2000 DSA for Guinea nevertheless assumed a growth rate of more than 4 per cent for year 2000. Finally, the delay in Côte d'Ivoire's enhanced decision point shows how real conflicts are even in cases where a country has reached a HIPC decision point.

### **3 HIPC debt sustainability indicators**

As Ajayi and Khan (2000) have pointed out recently, given that it is in practice nearly impossible to calculate the sustainable level of foreign borrowing, various ratios—such as that of debt to exports, debt service to exports, and debt to GDP (or GNP)—have become standard measures of sustainability. However, the HIPC framework defines debt sustainability largely by a debt-to-export ratio, whereby under the enhanced framework, a NPV debt-to-export ratio of 150 per cent (down from 200-250 per cent) is considered to be sustainable. Only for countries having an export-to-GDP ratio of at least 30 per cent (down from 40 per cent) and a government revenue-to-GDP ratio of at least 15 per cent (down from 20 per cent), a NPV debt-to government revenue ratio of 250 per cent (down from 280 per cent) is considered to be sustainable. Of the 23 countries having reached the decision point under the enhanced HIPC Initiative by end-June 2001, only four countries (Guyana, Honduras, Mauritania, and Senegal) have qualified under the fiscal criteria. This section analyses first the appropriateness of the HIPC debt sustainability indicators based on the recent literature and provides then some empirical evidence on the relevance of various debt sustainability indicators.

#### **3.1 Appropriateness of the HIPC debt sustainability indicators**

One of the most serious critiques of the HIPC framework is that it uses inappropriate or at least insufficient debt sustainability criteria. For example, Sachs (2000) has expressed the view that the HIPC sustainability criteria have nothing to do with debt sustainability in any real sense. Others have stressed that 'the ratios of debt and debt service to exports, which are more frequently used, are hard to justify on theoretical grounds', and that 'at the very least, indicators relative to GDP should be taken as seriously as indicators relative to exports'.<sup>20</sup> Finally, there is some doubt if the NPV calculations used in the HIPC framework are appropriate. Among many problems related to discounting, the key argument is that discounting unpayable debt at market discount rates gives the wrong picture about a HIPC's debt burden.<sup>21</sup>

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<sup>19</sup> For a theoretical and empirical analysis of the effects of economic policy and the receipt of foreign aid on the risk of civil war, see Collier and Hoeffler (2000).

<sup>20</sup> See IMF (1998: 39-40).

<sup>21</sup> See Gunter (forthcoming) for some further details.

While the debt-to-export ratio has some justification for the determination of an upper limit of a country's debt sustainability, it says very little about a government's ability to repay its external public debt. As a World Bank (2001b: Table 3) HIPC study shows, at least four countries (Guinea, Mauritania, Niger, and Zambia) will continue to pay between 20-23 per cent of their government revenues as external debt service on public or publicly guaranteed debt after enhanced HIPC debt relief. While this is largely due to the highly restrictive thresholds for the application of the HIPC fiscal indicator, a more flexible debt-to-export criterion could also avoid such problems.<sup>22</sup>

In any case, as is well-known, the debt-to-export ratio has been used for mostly middle-income Latin American countries in the aftermath of the 1982 debt crisis, whereby a substantial part was private debt and exchange rate adjustments ensured substantial trade surpluses. However, most HIPCs import not only more than they export (Cameroon and Côte d'Ivoire are two exceptions). Indeed, as was shown for example by López and Thomas (1990), Sub-Saharan African economies depend highly on imports. Furthermore, due to access constraints to industrialized countries' markets for developing country exports as well as some market saturations for HIPC exports, trade deficits are likely to remain for HIPCs at least over the next 10 to 20 years.<sup>23</sup>

Even if HIPCs would be forced to cut their imports and increase their exports to earn the foreign exchange needed to repay external debt, the government owing the debt may only get a small amount of the export revenues.<sup>24</sup> For example, multinational enterprises own close to 90 per cent of Guinea's exports and use most of the foreign exchange earnings for imports of equipment, salaries of expatriate workers, and transfers of profits. In some cases, exports of HIPCs reflect a large degree of re-exports (the exports simply pass through the country and no foreign exchange is earned by anybody).<sup>25</sup> Finally, the way the NPV debt-to-export criterion is currently used in the HIPC framework discourages a HIPC's export-led growth strategy, especially in HIPCs where the decision point is some time in the future.<sup>26</sup>

Related to the inappropriate debt sustainability indicator is the critique that the HIPC Initiative's country selection is too narrow.<sup>27</sup> Some of the world's poorest countries

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<sup>22</sup> Indeed, Cohen's (1996) analysis has shown that the sustainable debt-to-export ratios associated to a 25 per cent discount of estimated secondary market prices would be 68 per cent for Guinea, 90 per cent for Niger, and 79 per cent for Zambia.

<sup>23</sup> See Hersel (1998) for a more detailed analysis of sustained trade deficits and the interdependency between external debt and trade policy.

<sup>24</sup> These budgetary aspects of the transfer problem have been analysed by Dani Rodrik and especially by Helmut Reisen, see Hjertholm (1999) for further references.

<sup>25</sup> Thus far, the HIPC framework has not been consistent in either including or excluding re-exports in the calculation of the debt-to-export criteria.

<sup>26</sup> Though some precaution had been taken to capture export volatility by defining exports as a three-year backward looking average, it would have been better to take a much longer backward looking average ending with the year before the framework of the initiative is adopted, not with year previous to the HIPC decision point.

<sup>27</sup> The HIPC initiative defines a country as 'heavily indebted' if traditional debt relief mechanisms are unlikely to reduce a country's external debt to a sustainable level. The criterion for being 'poor' is to be an IDA-only country. An IDA-only is considered to rely on financial resources from the World Bank's International Development Association (IDA), whereby the main criterion is based on a country's GDP per capita. However, a few other exceptions have been made to this income per capita



have been excluded from the HIPC Initiative as their debt is—according to the narrowly defined HIPC criteria—considered to be sustainable. In the words of a recent EURODAD (2001) report, the concept of debt sustainability has to be approached from a human and social development perspective. The fact that IDA-only countries like Bangladesh, Cambodia, Haiti, Nepal, and Tajikistan have a GDP per capita of less than one-dollar-a-day, makes it obvious that these countries do not have their own resources to repay their external debt, not now and not in the foreseeable future.<sup>28</sup> The only reason these poor countries can service their external debt currently is that they receive currently new loans that are more than sufficient to repay old debt. However, this continuous repaying of old debt with new debt cannot be considered to constitute debt sustainability.

There are also cases in which low-income heavily indebted countries are not part of the HIPCs, as they are considered to be not IDA-only countries. The example of Nigeria is relatively well-known. Nigeria is highly indebted: its NPV debt-to-export ratio is estimated to be 188 per cent (38 per cent higher than what is considered to be sustainable under the enhanced framework). It is also a poor country: GDP per capita is below US\$300 a year and more than 70 per cent of its 120 million population live in absolute poverty (below one-dollar-a-day). The official reason for Nigeria's exclusion from the group of HIPCs is that Nigeria does—due to its large oil reserves—not rely on IDA assistance. In other words, it is expected that Nigeria extracts and sells its oil to generate the foreign exchange and revenues necessary to repay its external debt, most of which was contracted by corrupt previous governments.

### 3.2 Empirical evidence on the relevance of debt sustainability indicators

While there are overwhelming theoretical arguments for extending the debt sustainability indicators of the HIPC Initiative, little empirical evidence for the relative importance of various debt sustainability indicators has been presented so far.<sup>29</sup> We intend to draw some conclusions on the relative importance of debt sustainability indicators by substituting three debt sustainability indicators in otherwise standard specifications of a macroeconomic investment function.<sup>30</sup> The three debt sustainability

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criterion. Originally, Nigeria and Equatorial Guinea were also considered to be HIPCs, but have been dropped from the list of HIPCs as they were later on considered to be no more IDA-only eligible countries. Malawi and The Gambia have been added recently as it became clear that their debt is higher than initially estimated. For the most current list of HIPCs, see the HIPC website: [www.worldbank.org/hipc/](http://www.worldbank.org/hipc/)

<sup>28</sup> Even if these countries would have an income per capita growth rate of 5 per cent per year (none of them did so in the past or do so currently), they would still remain to be IDA-only countries in 20 years.

<sup>29</sup> See Hjertholm (1999) for an excellent review of the analytical history of HIPC debt sustainability targets, whereby he points out that there is no analytical basis for the appropriate level of the HIPC fiscal indicator.

<sup>30</sup> The traditional investment literature has gone through considerable changes from the accelerator theory, to the neoclassical theory of investment and finally, Tobin's q-theory. However, based on the poor empirical performance of these traditional investment theories, recent research of the investment theory has led to a revised and extended account of the determinants of investment. This holds particularly true for the determinants of investment in developing countries. A good review of empirical investment function specifications for developing countries is provided by Rama (1993). The specification here broadly follows that of Gunter (1998) and Oshikoya (1994).

indicators analysed are (i) the debt-to-export ratio [DEXP], (ii) the debt-to-GNP ratio [DGNP], and (iii) the debt-to-government revenue ratio [DREV]. In algebraic terms, we estimate the following three regressions:<sup>31</sup>

$$\text{INVFIPIR} = \alpha + \beta \log(\text{INTLEN}) + \delta \text{HESLAG} + \delta \log(\text{DEXP}) \quad (1.a)$$

$$\text{INVFIPIR} = \alpha + \beta \log(\text{INTLEN}) + \delta \text{HESLAG} + \delta \log(\text{DGNP}) \quad (1.b)$$

$$\text{INVFIPIR} = \alpha + \beta \log(\text{INTLEN}) + \delta \text{HESLAG} + \delta \log(\text{DREV}) \quad (1.c)$$

whereby

INVFIPIR = the ratio of fixed private domestic investment to GDP,

INTLEN = the nominal lending interest rate,<sup>32</sup>

HESLAG = the lagged real growth rate (based on PPP adjusted GDP),<sup>33</sup>

Given that the Durbin-Watson statistics of the initial regressions ranged from 0.31-0.34 (indicating autocorrelated errors), an AR(1) specification has been applied to the regressions to take care of first order autocorrelation. After invoking the AR(1) error correction, the Durbin Watson statistics range from 1.7 to 2.2, thus indicating no further autocorrelation.

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<sup>31</sup> All data come from the Branson, Guerrero and Gunter (forthcoming) database, a database compiled mainly from various World Bank and IMF databases but also from other sources, like the Penn World Tables (the Summers and Heston database). The database covers 25 years of time-series data of 21 industrialized and 72 developing countries (including 30 HIPCs), whereby the number of countries included in the databases has been limited to have a near balanced panel. Since data on debt indicators are limited to developing countries, we have excluded the 21 industrialized countries, leaving us—due to other constraints on data availability—with a minimum of at least 1000 observations for each variable.

<sup>32</sup> The usual proxy for the cost of capital is the real interest rate. However, given that data on real interest rates are highly distorted, many earlier investment studies have shown that real interest rates are hardly a significant determinant of investment. This is consistent with the view that the cost of capital is determined by other factors besides interest rates, they are not easy to get a hold of. Also, instead of using inflation biased real interest rates, nominal interest rates may serve as a better proxy of both the cost of capital and the availability of credit.

<sup>33</sup> There is little doubt that the income accelerator is a considerable determinant of investment. One simple and good measure of the income accelerator is the current growth rate of GDP. However, given the likely bivariate causality between the current growth rate and investment, the growth rate needs to be lagged by one period. It is obviously real, not nominal growth, which is the more appropriate variable in the determination of investment. The lagged real growth rate serves also as broad approximation of the availability of investment funds, which constitute another important determinant of investment.

Table 6  
Regression results

	LOG (INTLEN)	HESLAG	FDI	FINDEV1	FINDEV2	LOG (DEXP)	LOG (DGNP)	LOG (DREV)
Part 1: Simple basic specification								
(R-squared varies between 0.80 and 0.82; DW statistic varies between 1.74 and 2.13)								
EQ. 1.a	-0.26	0.04				-1.84		
<i>t-stat</i>	-0.4	1.9				-2.4		
EQ. 1.b	-0.03	0.03					-1.92	
<i>t-stat</i>	-0.1	1.8					-2.5	
EQ. 1.c	-0.18	0.05						-2.59
<i>t-stat</i>	-0.3	2.4						-3.2
Part 2: Specification with foreign direct investment								
(R-squared varies between 0.80 and 0.81; DW statistic varies between 1.74 and 2.17)								
EQ. 2.a	-0.66	0.04	0.17			-2.24		
<i>t-stat</i>	-1.1	1.7	1.5			-2.7		
EQ. 2.b	-0.42	0.04	0.26				-2.80	
<i>t-stat</i>	-0.7	1.7	2.3				-3.3	
EQ. 2.c	-0.46	0.06	0.21					-3.02
<i>t-stat</i>	-0.7	2.4	1.6					-3.4
Part 3: Specification with financial market development indicator #1								
(R-squared varies between 0.81 and 0.82; DW statistic varies between 1.75 and 2.19)								
EQ. 3.a	-0.47	0.04	0.18	7.40		-1.85		
<i>t-stat</i>	-0.8	1.8	1.6	1.7		-2.2		
EQ. 3.b	-0.26	0.04	0.27	7.79			-2.58	
<i>t-stat</i>	-0.4	1.7	2.4	1.8			-3.0	
EQ. 3.c	-0.37	0.07	0.21	6.54				-0.17
<i>t-stat</i>	-0.5	2.6	1.7	1.3				-3.1
Part 4: Specification with financial market development indicator #2								
(R-squared varies between 0.81 and 0.82; DW statistic varies between 1.73 and 2.16)								
EQ. 4.a	-0.68	0.04	0.17		4.70	-2.02		
<i>t-stat</i>	-1.1	1.6	1.5		2.2	-2.4		
EQ. 4.b	-0.48	0.03	0.26		4.75		-2.60	
<i>t-stat</i>	-0.8	1.5	2.2		2.2		-3.0	
EQ. 4.c	-0.55	0.06	0.21		5.08			-2.75
<i>t-stat</i>	-0.8	2.3	1.6		2.2			-3.1

The results for the three basic regressions (1.a to 1.c) are presented in Part 1 of Table 6. It turns out that—among the three debt sustainability indicators—the debt-to-government revenue ratio (DREV) is the most significant determinant for private fixed investment, followed by the debt-to-GNP (DGNP) and debt-to-exports (DEXP) ratios.

We have tested the robustness of the results with a variety of alternative investment specifications, all of which provide the same results with regards to the relative importance of the three debt sustainability indicators. First, given the importance foreign direct investment plays as a catalyst for private investment in developing

countries, we have added net foreign direct investment (in per cent of GDP) to the model specification. It has also been suggested that FDI is a better indicator than the partly complementary, partly substitutionary public fixed investment. Second, recognizing that the recent literature<sup>34</sup> has shown that financial market development is one of the most robust determinants for investment and growth, we have added two standard indicators for financial market development: (i) the ratio of liquid liabilities of the financial system to GDP, and (ii) the ratio of deposit money bank domestic assets to deposit money bank domestic assets plus central bank domestic assets. While the more detailed results of these alternative model specifications are presented in Parts 2-4 of Table 6, the important point is that the relative significance of the three debt sustainability indicators remains the same, whatever the change in the model specification.<sup>35</sup>

## **4 Some possible modifications**

While more comprehensive suggestions on necessary improvements and possible modifications of the HIPC Initiative are presented in Gunter (forthcoming), the goal of this section is to make some more specific suggestions on issues related to the HIPC Initiative's long-term debt sustainability.

### **4.1 Aid coordination, additionality, and burden-sharing**

First of all, more aid coordination is needed to reverse the currently decreasing trends in development assistance, especially to HICPs. More specifically, to avoid the current prisoner's dilemma for new disbursements to HICPs that have not reached their decision point, the HIPC Initiative's burden-sharing should be based on a simplified end-2000 DSA. The discount rates used for such an end-2000 DSA, as well as any future DSA, should be low, fixed, and uniform across currencies (e.g. 3 per cent). The burden-sharing concept should also be enhanced, by taking the creditor's economic power into account.

### **4.2 Realistic growth assumption**

Second, the DSA growth assumptions should be more realistic. This could be achieved by projecting future growth rates based on macroeconomic principles like analysing

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<sup>34</sup> See Levine (1997) for a review and synthesis.

<sup>35</sup> We have also tested the robustness of the relative significance of the three debt sustainability indicators by substituting the three debt ratios (DEXP, DGNP, and DREV) with three corresponding debt service ratios: (i) the debt service-to-export ratio [DSEXP], (ii) the debt service-to-GNP ratio [DSGNP], and (iii) the debt service-to-government revenue ratio [DSREV]. The rationale is that substituting the three debt ratios with corresponding debt service ratios should give us the same results in terms of relative importance of three indicators. However, we should keep in mind that private investors are more likely to look at the implications of the debt stock on future debt service payments than at the current debt service payments. Thus, we should expect lower significance levels for the three debt service indicators. Indeed, our regression results show that substituting the debt ratios with corresponding debt service ratios results in insignificant t-statistics for the three debt service ratios, however, the message on the relative importance of the three indicators remains valid.

recent trends in structural transformations, investment and savings rates, as well as by accounting explicitly for negative impacts related to AIDS and climate change.

### **4.3 Gradual replacement of loans by grants?**

Third, following a suggestion made by the US International Financial Institution Advisory Commission, commonly referred to as the Meltzer Commission,<sup>36</sup> discussion is currently underway to gradually replace new IDA loans to the poorest countries by grants. Though this would obviously be favourable for the long-term debt sustainability of these countries, the biggest problem is that this could reduce the overall availability of financial assistance to the poorest, especially if annual IDA contributions are not increased appropriately.<sup>37</sup> In any case, a selected, gradual and fully-funded replacement should be analysed in more detail.

### **4.4 Debt sustainability indicators and HIPC eligibility**

Finally, it is suggested to eliminate the two threshold ratios for the applicability of the fiscal debt sustainability indicator (i.e., the requirements of having an export-to-GDP ratio of at least 30 per cent and a government revenue-to-GDP ratio of at least 15 per cent). While more analysis would be needed to determine the appropriate level of the fiscal indicator, whereby a few country-specific vulnerability factors (e.g., export concentration) should be taken into account, the recommendation to focus less on export-related and more on government revenue-related indicators is not new. For example, more than ten years ago, Dittus (1989) had analysed the budgetary dimension of the debt crisis in low-income Sub-Saharan Africa and suggested to assign the debt service-to-revenue ratio a central role.

Furthermore, it is suggested to replace the current 'IDA-only' requirement with a purchasing-power parity (PPP) based GDP per capita level, whereby two categories are suggested: category-one countries would have a PPP-based GDP per capita below US\$1,500;<sup>38</sup> category-two countries would have a PPP-based GDP per capita between US\$1,500 and US\$3,000.<sup>39</sup> For category 1 countries it is suggested to limit debt service payments to 5 per cent of the average 1990-99 government revenues, independent of what the NPV debt-to-export and the NPV debt-to-government revenue ratios are. The

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<sup>36</sup> A slightly edited version of the report is available at this University of Michigan site: [www.econ.lsa.umich.edu/~alandear/topics/meltzer.html](http://www.econ.lsa.umich.edu/~alandear/topics/meltzer.html) .

<sup>37</sup> On the other hand, there would be no need to worry about such an outcome if all OECD countries would raise their aid target set at 0.7 per cent of GNP by the UN many years ago, or if the international community could agree to suggestion related to the international taxation of exchange rate speculations. For other problems related to the replacement suggestion, see the US Treasury's response to the Meltzer report, available at: <http://www.ustreas.gov/press/releases/docs/response.pdf> .

<sup>38</sup> Category one would include the 31 poorest HIPCs, but also add Bangladesh, Bhutan, Cambodia, Comoros, Djibouti, Eritrea, Haiti, Nepal, Nigeria, and Tajikistan.

<sup>39</sup> Category two would include eight of the 10 richest HIPCs (in terms of PPP-based GDP per capita: Bolivia, Cameroon, Côte d'Ivoire, The Gambia, Ghana, Guinea, Honduras, Mauritania, Nicaragua, and Vietnam) and 15 non-HIPCs with a PPP-based GDP per capita between US\$1,500 and US\$3,000. The only two HIPCs excluded in both categories are Angola and Guyana, which have a PPP-based GDP per capita of US\$3,200 and US\$3,600, respectively.

decision on which creditor would get paid would need to be based on a predetermined rule that combines (i) the share of debt service due to each creditor with (ii) the creditor's ability to provide debt relief based on the creditor's income level.

For the richer (though still poor) category-two countries, the current eligibility criteria could be applied after elimination of the threshold requirements for the fiscal indicator. If eligible, debt service payments should be limited to 10 per cent of the average 1990-99 government revenues. These limits on the annual debt service to government revenue ratios would not only ensure that governments could spend their revenues on development tasks, they would also ensure private investors that the government will not be forced to increase current and future taxes to effect the repayment of external debts. Hence, it would eliminate a very critical determinant of the debt overhang effect.

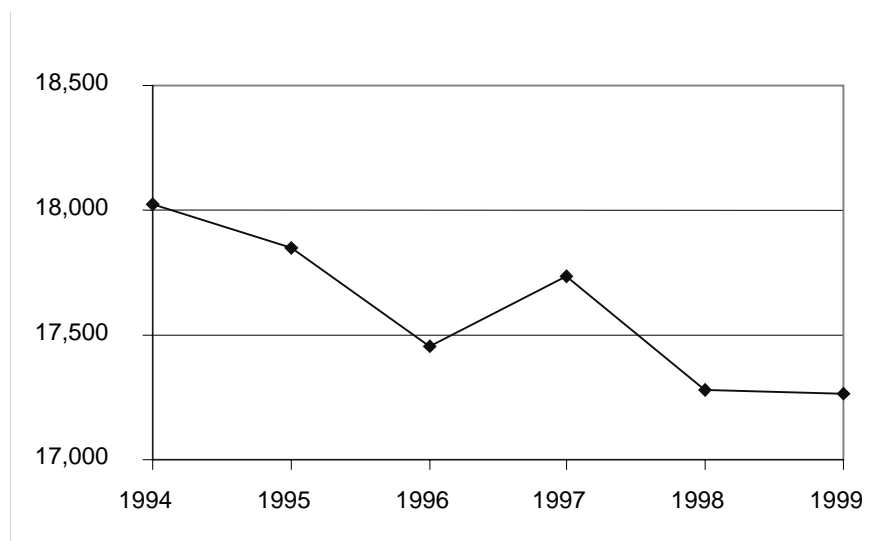
## **5 Summary and conclusion**

One of the most serious problems of the HIPC Initiative is that it may not achieve its key goal of providing a solid exit from future debt rescheduling. In trying to assess how likely HIPCs are to achieve debt sustainability, we first looked at various capital flows to HIPCs. Excluding a very few exceptions, it was shown that private capital flows as well as disbursements of private and public creditors to HIPCs have generally decreased since the adoption of the HIPC Initiative. Three aspects make these negative trends in capital flows to HIPCs worse: (i) capital flows to non-HIPC low income countries have increased (at least in nominal terms), (ii) capital flows continued to decrease for Uganda, Bolivia, Burkina Faso, and Guyana, even after they reached their original decision points, and (iii) there are even reductions in grants and disbursements of concessional loans. These negative trends in terms of capital flows to HIPCs are also reflected in an overall reduction in net aggregate resource flows to HIPCs (see Figure 14), which imply that compared to previous years, HIPCs had less and less resources for development tasks at least until 1999. Projections are that net aggregate resource flows to HIPCs may—due to HIPC debt relief—increase in 2001 and may remain relatively stable after 2001.

Second, we have looked at changes in investment and savings rates and sectoral transformations of HIPCs during the last decade, which generally indicated that there is no macroeconomic foundation for the high DSA growth assumptions of Guinea-Bissau, Madagascar, Mauritania and Rwanda. A similar analysis for the other HIPCs (provided in Appendix 1) shows that most of the other growth assumptions (excluding Guyana, Mozambique, and Uganda) are also highly optimistic. We have also noted that the impacts of AIDS and climatic changes have been neglected in the growth assumptions of most HIPCs.

Third, based on the theoretical and empirical examination of the HIPC debt sustainability criteria, there is some justification to the critique that the HIPC Initiative uses inappropriate and insufficient debt sustainability indicators. One shoe does not fit all and the thresholds for the fiscal indicator should be eliminated. We have also made suggestions with regards to limiting HIPC debt service in terms of debt service-to-government ratios under a second enhancement of the HIPC Initiative that differentiates according to PPP-based income per capita levels.

Figure 14  
Net aggregate resource flows to HIPCs  
(current US\$ million)



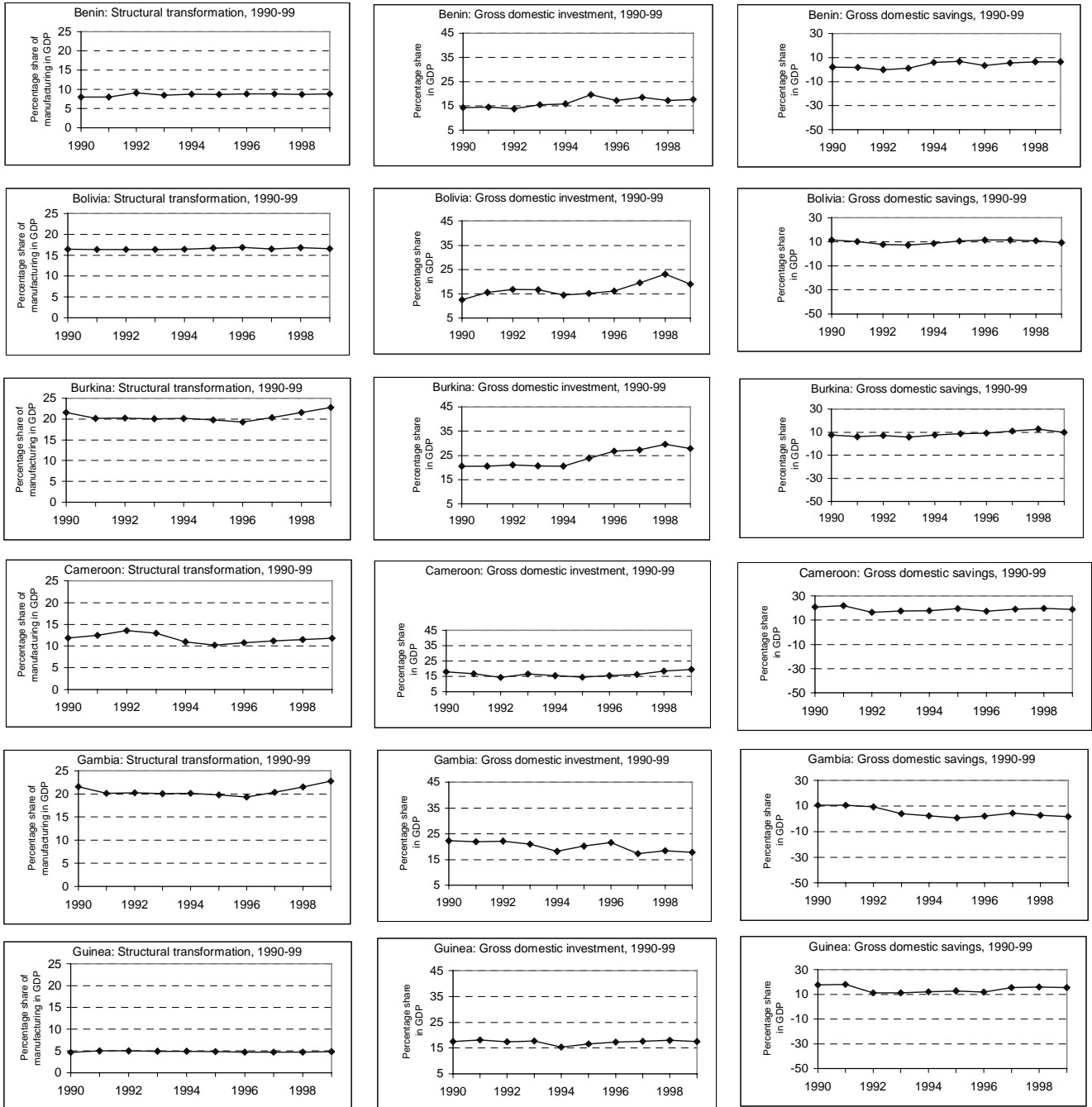
Based on this background the overall conclusion is that the HIPC Initiative is unlikely to provide a solid exit from future debt rescheduling for many of the poorest countries. Indeed, even the IMF and World Bank acknowledge that the NPV debt-to-export ratio is projected to remain above 150 per cent for 10 years or more for at least three HIPCs (Bolivia, Malawi, and Niger).<sup>40</sup> Note that even there, optimistic export growth projections have been used for Bolivia (9.1 per cent per annum for 2000-10, compared with 5.7 per cent per annum for 1990-99) and Niger (5.4 per cent per annum for 2000-10, compared with -3.9 per cent per annum for 1990-99).<sup>41</sup> As long as debt sustainability of many of the poorest countries is questionable, some debt overhang effects are likely to remain and have a negative impact on investment, growth and poverty reduction. Though the enhanced HIPC Initiative is likely to have a positive impact on poverty reduction in many HIPCs, more sustainable development and further going poverty reduction could be achieved with a more definitive exit from unsustainable debt than the enhanced HIPC Initiative provides.

<sup>40</sup> IMF and World Bank (2001: 19).

<sup>41</sup> IMF and World Bank (2001: 24, Table 5).

## Appendix table

Trends in structural transformation, gross domestic investment rates, and gross domestic savings rates  
for the 22 HIPCs that reached the enhanced decision point by end-December 2000

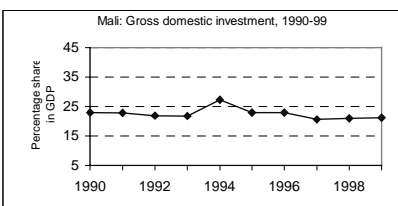
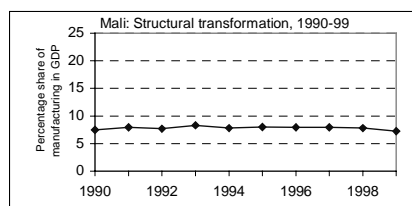
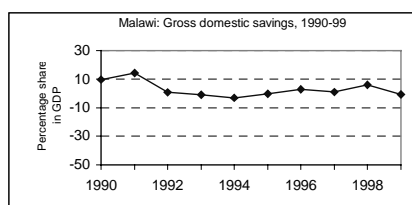
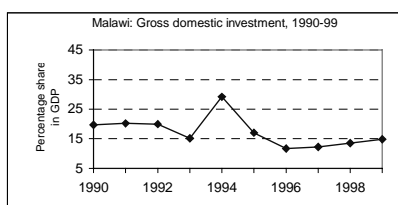
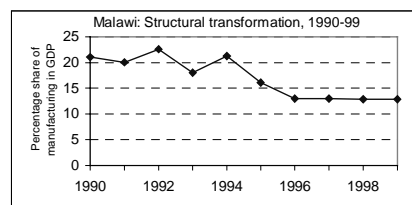
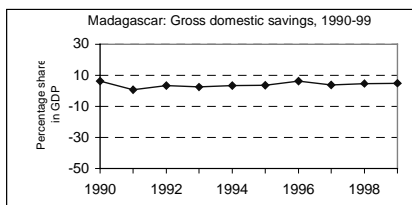
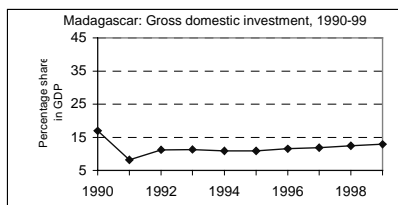
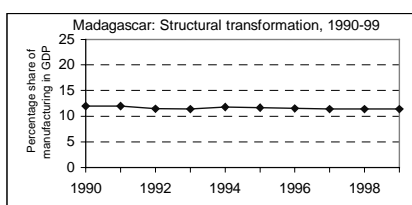
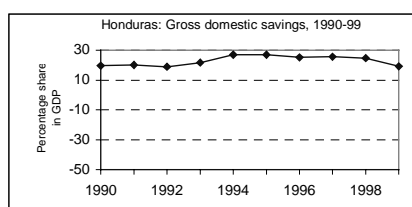
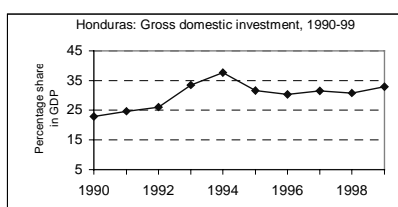
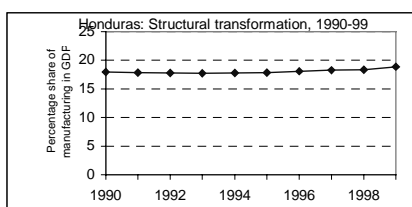
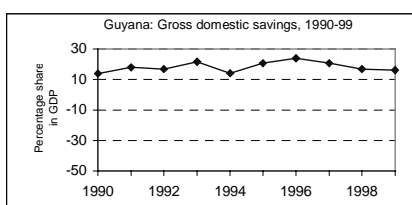
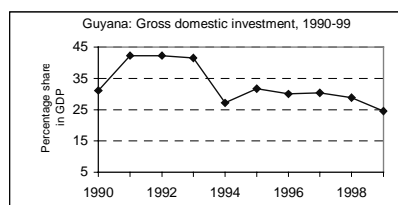
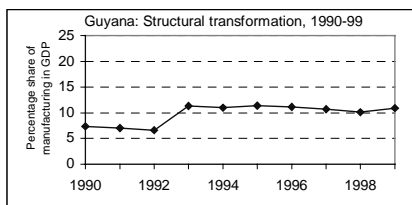
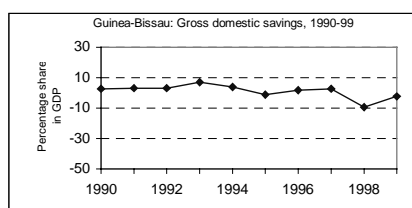
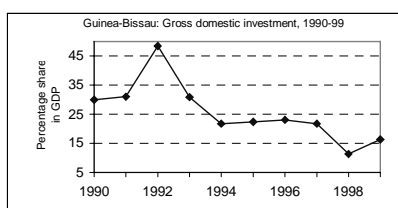
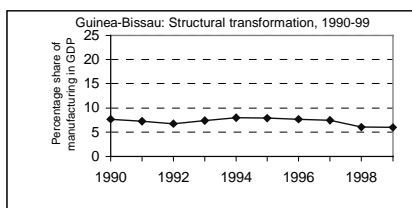


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Appendix table (con't)

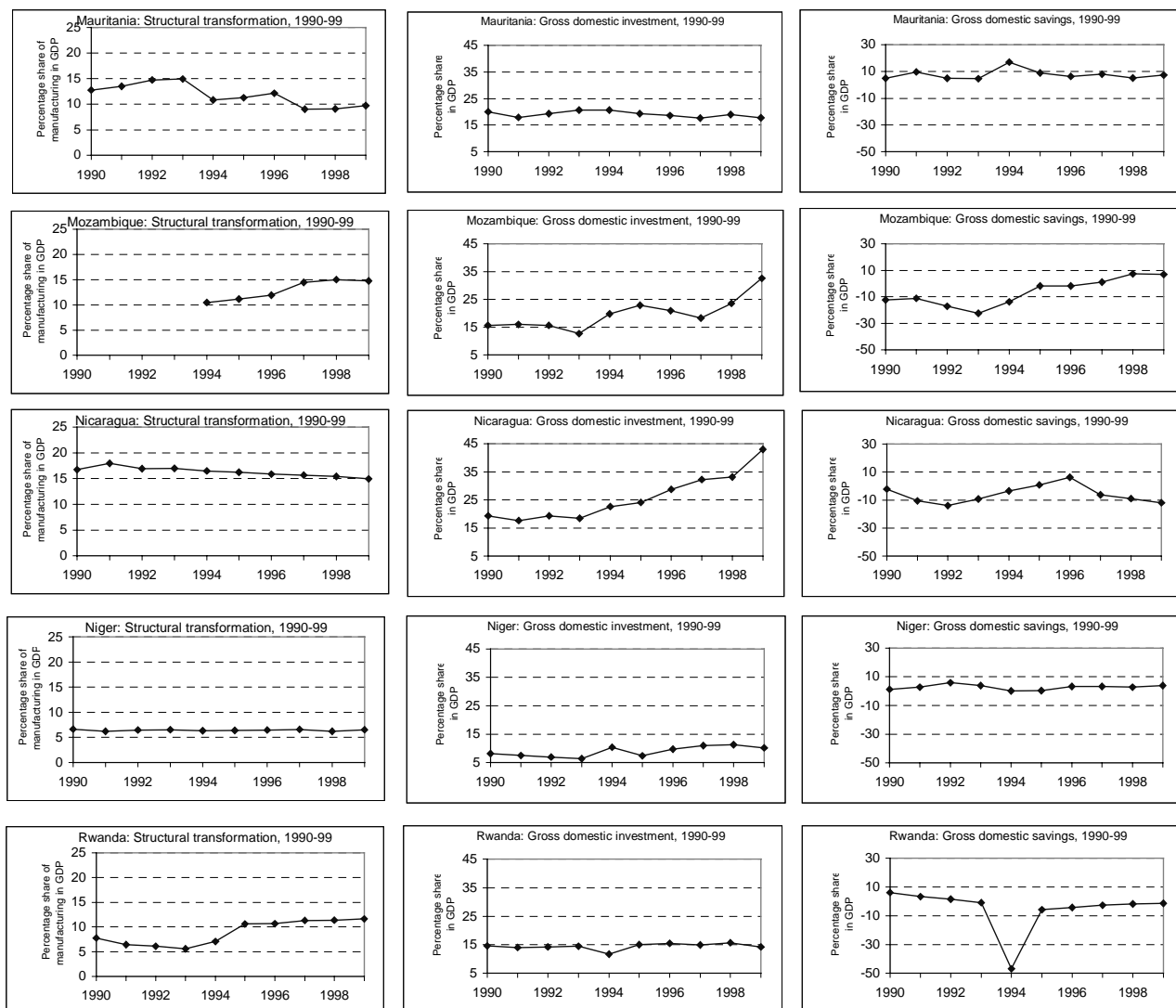
Trends in structural transformation, gross domestic investment rates, and gross domestic savings rates for the 22 HIPCs that reached the enhanced decision point by end-December 2000



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Appendix table (con't)

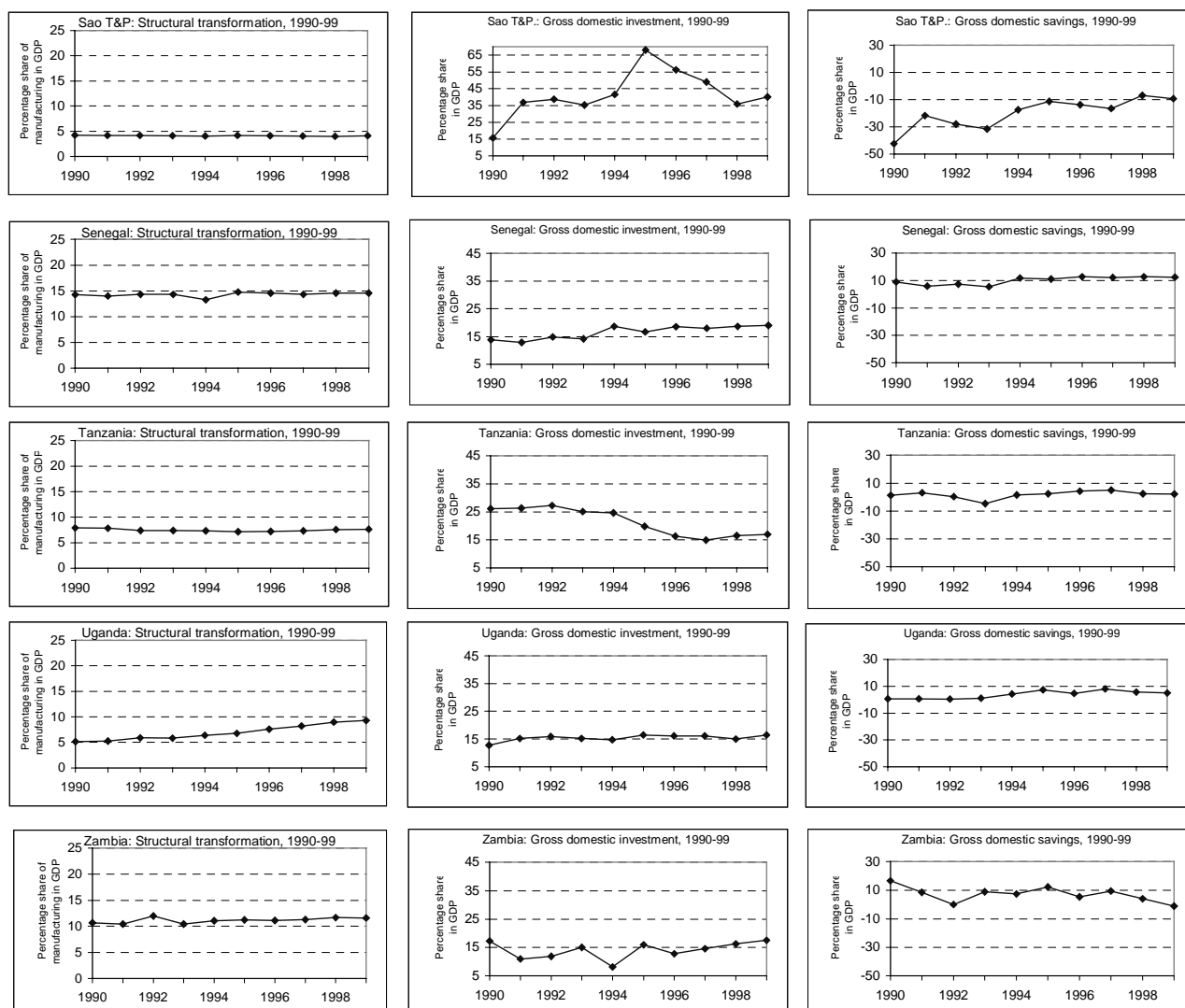
Trends in structural transformation, gross domestic investment rates, and gross domestic savings rates for the 22 HIPCs that reached the enhanced decision point by end-December 2000



Appendix table continues...

## Appendix table (con't)

Trends in structural transformation, gross domestic investment rates, and gross domestic savings rates for the 22 HIPCs that reached the enhanced decision point by end-December 2000



Source: World Bank, World Development Indicators, except for Guinea-Bissau's and Madagascar's 1998 and 1999 percentage shares of manufacturing, which have been updated from more recent IMF country reports (available on the IMF website).

## Appendix-Summary Analysis

Given that we are interested to draw conclusions on the macroeconomic foundation of the DSA growth assumptions, we define a positive trend in the three categories as having realized (1) a total increase between 1990 and 99 of at least 1 per cent, and (2) a total increase of at least 0.2 per cent during the last 2 years (1997-99). Based on these minimal criteria for a positive trend, of the 22 HIPCs that have reached the enhanced decision point by end-December 2000:

- only 5 countries experienced a positive trend in their structural transformation (Burkina Faso, Guyana, Mozambique, Rwanda, and Uganda);
- only 7 countries experienced a positive trend in their share of investment to GDP (Burkina Faso, Cameroon, Honduras, Mozambique, Nicaragua, Senegal, and Uganda); and
- only 5 countries have experienced a positive trend in their share of investment to GDP (Benin, Mozambique, Niger, Sao Tome & Principe, and Senegal).

Finally, note also that within this group of 22 HIPCs, only Mozambique experienced a positive trend in all three categories.

## References

- Ajayi, S. Ibi, and Mohsin S. Khan (2000). *External Debt and Capital Flight in Sub-Saharan Africa*. Washington, DC: International Monetary Fund.
- Berthélemy, Jean-Claude, and Ludvig Söderling (2001). 'The Role of Capital Accumulation, Adjustment and Structural Change for Economic Take-Off: Empirical Evidence from African Growth Episodes'. *World Development*, 29 (2): 323-43.
- Branson, William H., Isabel M. Guerrero, and Bernhard G. Gunter (forthcoming). *Macroeconomics for Developing Countries*.
- Bretton Woods Committee (2000). 'Concluding Report of a Roundtable Discussion on Reassessing Debt Relief, November 2000'. Available at: [www.brettonwoods.org](http://www.brettonwoods.org) .
- Cohen, Daniel (1996). 'The Sustainability of African Debt'. WB Policy Research Working Paper No. 1621 (July). Washington, DC: World Bank.
- Collier, Paul, and Anke Hoeffler (2000). 'Aid, Policy and Peace'. Mimeo. Available at: [www.worldbank.org/research/conflict/papers.htm](http://www.worldbank.org/research/conflict/papers.htm) .
- Dittus, Peter (1989). 'The Budgetary Dimension of the Debt Crisis in Low-Income Sub-Saharan Countries'. *Journal of Institutional and Theoretical Economics*, 145 (2): 358-66.
- Easterly, William, and Ross Levine (2000). 'It's Not Factor Accumulation: Stylized Facts and Growth Models'. WB Policy Research Working Paper. Washington, DC: World Bank.
- EURODAD (2001). 'Debt Reduction for Poverty Eradication in the Least Developed Countries: Analysis and Recommendation on LDC Debt'. Brussels: EURODAD. Available at: [www.eurodad.org](http://www.eurodad.org) .
- Gunter, Bernhard G. (1998). 'Economic Structure and Investment under Uncertainty'. Washington, DC: American University, Department of Economics. Unpublished dissertation.
- Gunter, Bernhard G. (forthcoming). 'What's Wrong With the HIPC Initiative and What's Next?' *Policy Development Review*. Spring 2002.
- Hatton, Timothy J., and Jeffrey G. Williamson (2001). 'Demographic and Economic Pressure on Emigration out of Africa'. NBER Working Paper No. 8124. Cambridge, MA: National Bureau of Economic Research.
- Hersel, Philip (1998). 'The London Agreement of 1953 on German External Debt: Lessons for the HIPC-Initiative', in EURODAD, *Taking Stock of Debt Creditor Policy in the Face of Debtor Poverty*. Brussels: EURODAD.
- Hjertholm, Peter (1999). 'Analytical History of Heavily Indebted Poor Country (HIPC) Debt Sustainability Targets'. Copenhagen: Development Economics Research Group (DERG), Institute of Economics, University of Copenhagen. Available at [www.econ.ku.dk/derg](http://www.econ.ku.dk/derg) .
- International Monetary Fund (IMF) (1998). 'Report of the Group of Independent Persons Appointed to Conduct an Evaluation of Certain Aspects of the Enhanced

- Structural Adjustment Facility'. Washington, DC: IMF. Available at: [www.imf.org/external/pubs/ft/extev/index.htm](http://www.imf.org/external/pubs/ft/extev/index.htm) .
- International Monetary Fund (IMF) and World Bank (2001) 'The Challenge of Maintaining Long-Term Debt Sustainability'. Progress Report presented to the Development Committee and the International Monetary and Financial Committee (IMFC), Washington, DC: International Monetary Fund and World Bank. Available at: [www.worldbank.org/hipc](http://www.worldbank.org/hipc) .
- Krugman, Paul (1988). 'Financing vs. Forgiving a Debt Overhang'. *Journal of Development Economics*, 29 (3): 253-68.
- Krugman, Paul (1994). 'The Myth of Asia's Miracle'. *Foreign Affairs*, 73 (6) 62-78.
- Lindert, Peter H., and Jeffrey G. Williamson (2001). 'Globalization and Inequality: A Long History'. Paper presented at the Annual Bank Conference on Development Economics-Europe, June. Available at: [www.worldbank.org/abcde-europe](http://www.worldbank.org/abcde-europe) .
- López, Ramón E., and Vinod Thomas (1990). 'Import Dependency and Structural Adjustment in Sub-Saharan Africa'. *World Bank Economic Review*, 4 (2): 195-207.
- Oshikoya, Temitope W. (1994). 'Macroeconomic Determinants of Domestic Private Investment in Africa: An Empirical Analysis'. *Economic Development and Cultural Change*, 42 (3): 573-96.
- Rama, Martin (1993). 'Empirical Investment Equations for Developing Countries', in Luis Servén and Andrés Solimano (eds), *Striving for Growth After Adjustment: The Role of Capital Formation*. Washington, DC: World Bank, 107-43.
- Sachs, Jeffrey (1989). 'The Debt Overhang of Developing Countries', in Jorge de Macedo and Ronald Findlay (eds), *Debt, Growth and Stabilisation: Essays in Memory of Carlos Dias Alejandro*. Oxford: Blackwell, 80-102.
- Sachs, Jeffrey (2000). 'The Charade of Debt Sustainability'. *Financial Times*, 26 September: 17.
- Sachs, Jeffrey, Kwesi Botchwey, Maciej Cuchra, and Sara Sievers (1999). 'Implementing Debt Relief for the HIPC's' Cambridge: Center for International Development, Harvard University. Available at: [www.cid.harvard.edu/](http://www.cid.harvard.edu/) .
- Senhadji, Abdelhak (2000). 'Sources of Economic Growth: An Extensive Growth Accounting Exercise'. *IMF Staff Papers*, 47 (1): 129-57.
- United Nations Conference on Trade and Development (UNCTAD) (2000). *The Least Developed Countries Report*. New York: United Nations. Partly available at: [www.unctad.org/en/pub/ps1ldc00.en.htm](http://www.unctad.org/en/pub/ps1ldc00.en.htm) .
- United Nations Environment Programme (UNEP) and World Meteorological Organization (WMO), Intergovernmental Panel on Climate Change (IPCC) (2001). Third Assessment Report—Climate Change 2001. Summaries available at: [www.ipcc.ch/](http://www.ipcc.ch/) .
- United States General Accounting Office (GAO) (2000). *Developing Countries: Debt Relief Initiative for Poor Countries Facing Challenges*. Washington, DC: United States General Accounting Office. Available at: [www.gao.gov/new.items/ns00161.pdf](http://www.gao.gov/new.items/ns00161.pdf) .

World Bank (2000). *Intensifying Action against HIV/AIDS in Africa: Responding to a Development Crisis*. Washington, DC: World Bank, Africa Region.

World Bank (2001a). *Global Development Finance*. Washington, DC: World Bank.

World Bank (2001b). 'Financial Impact of the HIPC Initiative'. Paper produced by the HIPC Unit. Washington, DC: World Bank. Available at: [www.worldbank.org/hipc](http://www.worldbank.org/hipc) .

Young, Alwyn (1995). 'The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience'. *Quarterly Journal of Economics*, 110 (3) 641-80.



