Debt Dynamics and Contingency Financing: Theoretical Reappraisal of the HIPC Initiative

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Abstract

The objective of this paper is to examine debt dynamics of Highly Indebted Poor Countries (HIPCs) and identify key factors responsible for their protracted debt crisis. For this purpose, we first evaluate economic conditions of debt sustainability in the context of the intertemporal borrowing model, the growth-cum-debt model and the gap models. After reviewing other concepts of debt dynamics, such as 'liquidity problem' and 'insolvency condition', we analyse mechanisms whereby a debt burden becomes unsustainable and debt forgiveness is a rationale choice for both creditors and debtors to overcome the ensued 'debt overhang' condition. In the light of these theoretical expositions, we present empirical evidence as to how debt dynamics has evolved over the last two decades in selected HIPCs and question the effectiveness of *ex-post* debt relief facilities applied so far . In concluding section, we present our proposal to use a *state-contingent* debt contract as an *ex-ante* debt relief mechanism, as opposed to the current ex-post debt relief embedded in the HIPC initiative, which we view as an ineffective mechanism for 'debt-crisis' prevention and management.

Keywords: sovereign debt management, external debt, foreign aid, growth models, economic development

JEL Codes: F34; F35; O11; O19

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1. Introduction

As the plight of low income developing countries in the protracted debt crisis has caught the heart of many millions, a world-wide campaign by civil society activists and NGOs for more substantial or total debt cancellation is gathering momentum. In response to the growing demand for effective debt relief measures, Governments of G7 and multilateral lending institutions have now placed much of their credentials in the HIPC I and II initiatives. Indeed, by the mid 1990s, it had become clear for creditors of official debt that repeated debt rescheduling, which has been undertaken through the traditional forum of the Paris Club negotiations over the last two decades was approaching deadlock. The need for radical measures for writing off bilateral and multilateral official debt has finally surfaced as an `open agenda' on the negotiating table in 1996.

Can the HIPC initiatives, unlike other previously undertaken measures, deliver a real and durable exit option from the severe debt overhang condition for these Highly Indebted Poor Countries? An answer to this question depends critically on whether the initiatives are based on the sound diagnose and deeper understanding of the causes of the debt crisis of HIPC counties in the recent decades.

Naturally, such a complicated situation as the contemporary third world debt crisis cannot be attributed to a single cause. It requires a thorough analysis of a multitude of domestic and external factors that have compounded the current `debt overhang' stalemate intractable by traditional debt relief measures. In this context, a provocative thesis on the cause of the debt crisis and overhang, advanced by a World Bank economist, William Easterly (1999a) deserves a detailed examination from both theoretical and empirical perspectives.

As its analytical basis, Easterly's thesis rests on the intertemporal borrowing/lending model. He argues that a country with an excessive debt is one with a high discount rate against future and /or a low intertemporal elasticity of substitution. Thus, he views an `excessive debt' of HIPCs as a reflection of their peculiar order of intertemporal preference (in particular, that of the public sector), exhibiting a tendency to run down country assets. While interpreting the two key parameters of the model in this very specific perspective, his analysis tends to underplay a number of other main structural characteristics of low-income developing economies. He goes on to argue that the granting of progressively more favourable terms of debt and the debt forgiveness, without ensuring a switch of economic policies to the ones negotiated with the donor community, can have perverse incentive effects. These effects are said to lead to both further debt accumulation of a similar magnitude in anticipation of debt forgiveness and lukewarm efforts in policy reforms.

In our view, his story of HIPCs' debt dynamics is somewhat misleading, or one-sided at best. The objective of this paper is to examine debt dynamics of HIPCs and reveal one of key external conditions responsible for the protracted debt crisis facing HIPCs. It begins with an evaluation of the theoretical basis of Easterly's thesis. After analysing key variables affecting HIPCs' dynamics and sustainability of external debt, the paper also evaluates several conceptual pitfalls of the HIPC facilities and concludes with a proposal for a new approach to the third world debt problem.

The paper is structured as follows: <u>Section 2</u> first discusses the basic features of the intertemporal borrowing model in conjunction with other models such as the growth-cum-debt model and the gap models, which have been widely used in the discussion of the role of external finance for economic development. In the context of these models, we examine the conditions of debt sustainability. <u>Section 3</u> reviews other key concepts of debt dynamics such as liquidity problem and insolvency condition. Using these concepts, we analyse conditions under which debt burden becomes unsustainable and debt forgiveness becomes a rational choice for both creditors and debtors to overcome the ensued 'debt overhang' condition.

In the light of these theoretical expositions, <u>Section 4</u> presents empirical evidence as to how debt dynamics has evolved over the last two decades in selected HIPCs and how effective ex-post debt relief facilities have been in eliminating the debt overhang condition. <u>Section 5</u> examines the HIPC facilities and identifies some of their remaining weaknesses as an effective mechanism for `debt-crisis' prevention. It evaluates the debate on the effectiveness of policy conditionality as applied in the past and the accompanying proposal for raising aid effectiveness by applying the new `selectivity' rule. <u>Section 6</u> presents our proposal to use a *state-contingent* debt contract as an *ex-ante* debt relief mechanism as opposed to the prevailing *ex-post* facilities, in order to stem one of main conditions engendering an unsustainable debt path.

2. Models of debt and development

The intertemporal borrowing/lending model, which is used by Easterly to advance his arguments, is an extension of the theory of intertemporal optimisation behaviour of consumer or individual assets holder to the level of a country or nation, with a two-period budget constraint with the given levels of income, y_0 and y_1, and a two-period utility function $U(C_0, C_1)$. Thus, a country's intertemporal utility maximisation for the two-period is usually discussed in a diagram such as Figure 1.

In Figure 1, an intertemporal production possibility frontier (PPF) represents a trade-off between outputs in the two periods. The point A represents autarky position, where a country has no access to international capital markets and both producers and consumers face the domestic interest rate r , which exceeds the world interest rate, r*. The slope of the budget line at point *A* is *-(1+ r),* whereas that of the budget line at points *B* and *C* is *-(1 + r*).* With opening up to international borrowing, two effects emerge: a) the country can divert resources to more future production at *B*, as it responds to the lower interest rate, *r*;* and b) the country enjoys higher current consumption at *C*, as the higher utility indifference curve through point *C* than the one through point *A* indicates.

Figure   1:   Borrowing   from   Abroad
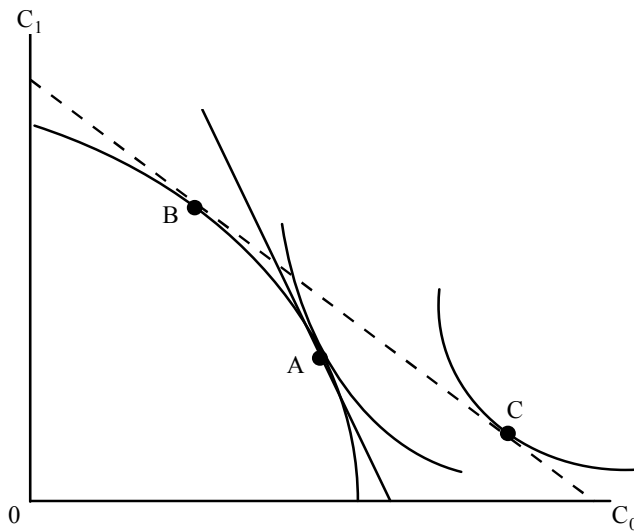
As Obstfeld and Rogoff (1996) show, this model visually links the current account concept and the domestic investment-saving gap, and illustrates the role of international borrowing and lending to fill the gap. Thus, accessing the international capital market, i.e. borrowing, allows a country to undertake the extra investment (shown by the horizontal distance between points *A* an *B*) as well as to enjoy the extra first-period of consumption (shown by the horizontal distance between points *A* and *C*). The sum of the two horizontal distances (the distance between *B* and *C*) is the first-period current account deficit, that reflects its resourse gap. At the same time, whilst a move from *A* to *C* reflects trade gains due to a smoothing of the time path of consumption, the further trade gains are realised by the change in the economy's production point from *A* to *B*.

Using this framework, Easterly (1999a) argues that a country's borrowing behaviour is critically influenced by the shape of its intertemporal indifference curve, which in turn is determined by the two parameters: the elasticity of intertemporal substitution and the subjective discount rate. The former measures the sensitivity of the intertemporal consumption allocation to an interest rate change, whilst the latter indicates how much weight the society places in aggregate on current enjoyment against one in future. They in combination are said to determine the economy's saving and investment schedules. Easterly characterises HIPCs as countries with a low intertemporal elasticity and high discount rate.

It is important to note that Easterly interprets the two parameters basically as the society's choice variable, arguing that a country chooses a set of `wrong' economic policies, which give rise to a low elasticity of intertemporal substitution and high discount rate. In particular, the government is seen as having a higher discount rate than private agents, due to the uncertainty of tenure and lower concern for future generations of government. Hence, in his view, firstly, a country gets into a heavily indebted position out of its own choice. Secondly, these two key behavioural parameters are assumed to be unchanged after debt relief, unless a country actually implements 'policy reforms', which are packaged by the donor community in the Structural Adjustment Programs. According to his thesis, for a country which does

not implement the Structural Adjustment Programmes (SAPs) in full, reduced liability through debt relief could lead to a slower rate of asset accumulation, i.e. a lower investment rate, as it endeavours to maintain its desired net worth as a ratio to consumption. With the constant property of intertemporal preference, the process of debt relief and a progressive substitution of concessional debt for a non-concessional one is seen as keeping the country perpetually heavily indebted, as a result of the possible combination of asset decumulation and liability accumulation.

Thus, he predicts that the granting of debt relief without ensuring a full adherence to policy conditionality set out by the donor community leads to negative saving and declining investment. This effect of debt relief is supposed to be in addition to other purported negative incentive effects, such as the delay of policy reforms in anticipation of "selling" reforms at a higher "price", or the creation of a moral hazard for borrowing in the expectation of debt forgiveness. Easterly presents a number of disparate empirical evidences to support his thesis of "high discount behaviour" as the cause of HIPC's misfortune against the alternative hypothesis suggesting that HIPCs became highly indebted due to external shocks. He concludes that debt relief is futile with unchanged long-run preferences.

However, his arguments stand on rather shaky ground, as a number of serious questions can be raised against his methodology in both conceptual and empirical aspects. Focusing here on the problems at the conceptual level, his treatment of the behavioural parameters as a reflection of *permanent* preference order of HIPCs', which could be changed only by adopting SAPs, can be seriously challenged. Indeed, once structural characteristic of low income economies, such as the low saving rate and high discount rate, are duly recognised as a manifestation of their stage of economic development rather than that of subjective preference, Easterly's thesis would fall apart. Economic development involves many structural changes, including a shift in these behavioural parameters. The real issue here is why SAPs, which have been adopted as conditionality for official aid by most of HIPCs since the mid 1980s, have not produced the necessary structural changes.

We shall return later to this critical question raised specifically in relation to SAPs in Section 5. Here, we continue to discuss the role of external finance for economic development in macroeconomic terms, in the context of two other theoretical models, i.e. the *gap* model and the *growth-cum-debt* model. Indeed, the idea that external finance (or foreign savings) could fill the domestic investment-saving gap, illustrated in the intertemporal borrowing model above, is a central discourse in the infamous gap model. In the original gap model, the limited domestic savings capacity is regarded as a critically binding constraint to further economic development. Based on the Harrod-Domer growth model, which postulates economic growth to be determined by an Incremental Capital-Output-Ratio (ICOR) and a fixed domestic savings rate, one of critical roles of official aid or concessional loans is defined as that of filling the gap between the low domestic saving rate and the *desired* investment rate in order to achieve the growth rate[1].

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[1] Easterly's criticism of the Financial Gap model in his another paper titled, "The Ghost of Financial Gap", Easterly (1999b) is basically directed at the gap model's uncritical adoption of the assumption of the fixed relationships between key parameters as found in the original Harrod-Domar growth model. However, as discussed in the text above, this has been long and widely recognised as one of

While foreign and domestic capital are treated as homogeneous in this single gap model, two-gap models of Chenery and Strout (1966) introduced the external trade gap as a qualitatively separate impediment, since foreign exchange availability to meet demand for imported goods essential for capital formation is recognised as a separate binding constraint on growth. By further distinguishing public saving from private saving, three-gap models, advanced by Bacha (1990), add a third fiscal constraint with a view of the fiscal dimension of the debt crisis and the well-known trade-off between growth and inflation because of the need of attaining fiscal equilibrium with a weak tax base and in the absence of developed financial markets. In these models, external finance availability (i.e. foreign flows netted out external debt service, private income transfers and changes in foreign exchange reserves) ultimately determine the level of investment, hence the growth rate.

In reality, three gaps identified as a separately distinguishable binding constraint in the model do interact closely with each other endogenously to engender an economy's adjustment path in response to various shocks. For example, *ex-ante* adjustments would take place with respect to all the relevant variables and parameters in order to ensure an *ex-post* National Income accounting identity between the foreign exchange gap and the domestic saving-investment gaps of private and public sectors. As Maizels (1968) notes, on the contrary to assumptions implied in the original gap models, the parameters should not be considered as fixed, and *ex-ante* domestic resource gap and *ex-ante* foreign exchange gap are not truly independent.

The necessary ex-ante adjustments are by no means either spontaneous or painless, whether achieved through the market mechanism or through government policies. As Chenery and Strout (1966) emphasise, there is no automatic mechanism to equate the gaps, and the process of closing the gaps is, in essence, a disequilibrium adjustment process. In general, the burden of adjustment could fall on one of the variables critical for the prospect of reaching self-sustained growth[2]. Taylor (1988, 1991) shows that while in theory there are several mechanisms by which the gaps between the three gaps can be closed in the wake of widened foreign resource shortfall, in all his eighteen case-study countries the growth rate is the endogenous adjustment variable.

The high costs occurring in the disequilibrium adjustment process are often related to structural rigidities stemming from the underdeveloped nature of economic structure. In the case of primary-commodity-dependent economies, the absence of resilience and dynamism is most acutely felt in their limited capacity to generate foreign

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the drawbacks of the model. The gap models should be instead treated as a macroeconomic analysis of the disequilibrium adjustment process as found in Taylor's discussion of the three-gap model (Taylor 1988, 1991). Then they remain useful as a guide in evaluating the role of external finance in facilitating macroeconomic adjustments. Easterly's criticism against gap calculations as practised at IFIs is valid and applicable to any other theoretical model, when models are applied mechanically for practical purposes without due calibrations. It is interesting to note that Easterly criticises the gap models for the assumption of fixed parameters and relationships between variables, while his own interpretation of the intertemporal borrowing model is based on the similar assumption.

[2]. Chenery and Strout (1966) provide a definition of self-sustaining growth as growth at a given rate with capital inflow limited to a specified ratio to GNP which can be sustained without concessional aid.

exchange revenues in a sustained manner. Accumulated external debt would easily impose an additional burden on their circumscribed capacity, as foreign exchange gaps would widen over time. Adjustment efforts can easily be undermined and continuously impeded by exogenously driven conditions such as the terms of trade shocks. Application of the three-gap model to SSA economies demonstrates that there is in practice no comfortable adjustment, which would accommodate an external disequilibrium such as the region's 40-50 % deterioration in the terms of trade.

In particular, the model implies that when supply of external finance available to a country is limited or overly inadequate to narrow the gaps, adjustment costs in terms of foregone economic growth can be high. Naturally, private capital is unlikely to be available at the time of gaps emerging in the form of macroeconomic imbalances. Hence, a need arises for official aid assistance. Furthermore, the cost difference between foreign aid and private capital flows can be substantial, as the rate of increase of debt obligation over time varies widely depending on the degree of concessionality in terms of interest rates charged, the grace period, maturity and other terms of debt conditions. In all cases except grants, the issue of *debt sustainability* poses a potential threat to development. Naturally, debt cannot be sustainable if debt servicing is accompanied by declining income growth and eventually by a reduction in consumption to an unacceptable level, as discussed in Section 3.

Thus, it is not surprising to find that the issue of debt sustainability was raised and discussed in the early debt literature which centres around the growth-cum-debt model. In fact, the debt cycle model, a derivative of the growth-cum-debt model, can be in many respects regarded as tracing a dynamic path generated by intertemporal borrowing over the extended period, and hence as an extension of the intertemporal borrowing/lending model above to multiple-period. The possibility of using international borrowing to enhance income over time in the first two stages of the debt cycle is illustrated in Figure 2.

In Figure 2, the lower curve shows the time path of income Y and absorption A, for a country under capital account autarky, where Y has to be equal to A throughout. In contrast, international borrowing is seen to enhance income over time, by permitting the level of absorption A to exceed income Y by the amount of capital inflow in the first period. However, the country eventually has to cease to borrow and start servicing the debt, forcing it to restrict absorption to a level lower than income. The model assumes that so long as capital inflows finance additional productive investment in the first period, Y grows faster than under the autarky condition, whilst maintaining absorption at a higher level than under the capital autarky throughout.

A, Y

Y with borrowing

A with borrowing

Y=A without borrowing

Net debt service
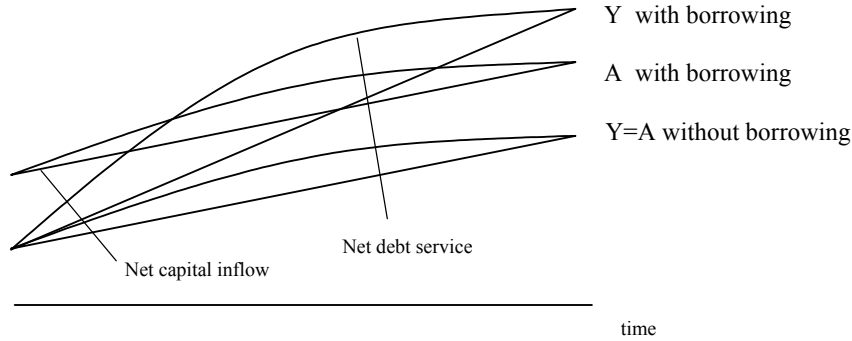
Net capital inflow

time

Figure 2: The Growth-cum-debt Model - International borrowing to enhance income

Naturally, such an optimistic scenario of the growth path can be realised under very restrictive conditions only. The earlier debt literature such as Avramovic (1964) is, however, quite positive about the possibility of a country remaining in a capital-importing status with a positive resource transfer for a considerably long period before growth takes off[3]. The conditions for the successful realisation of the income-enhancing debt strategy are summarised in the early literature as follows:

1) additions to external debt is used for growth-enhancing productive investment;
2) the growth rate targeted by this strategy, g^*, exceeds a stable world interest rate, r^*, i.e. $g^* > r^*$.

The second -generation of the growth-cum-debt model, which appeared after the debt crisis in the 1980s (McDonald, 1982; Hernandez-Cata, 1988), notes the following conditions for debt sustainability:

3) the marginal domestic savings rate, s_d, should exceed the investment ratio required by the target growth rate, I^*, i.e. $s_d > I^*$, so that debt will eventually begin to decline;
4) the marginal product of capital, f_k should exceed the cost of borrowing, i.e. $f_k > r^*$.

The second and fourth debt sustainability conditions underscores the need for a concessional debt facility for low-income countries., discussed above. Thus, the granting of concessional debt has a definite economic justification in the light of the debt sustainability condition for poorer countries, whose initial take-off requires a longer time and mobilisation of all available resources to sustain development.

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[3] Avramovic (1964), however, warns that progression through the virtuous cycle of debt and growth is by no means automatic and emphasises the need to fulfil sustainability conditions presented in the text above.

As to the first and third conditions, there has been a long-running debate on the effect of foreign aid on saving and investment[4]. It has been argued that aid is essentially a substitute for domestic savings, in particular public savings through reduced tax efforts, and that a large proportion of foreign aid is used to increase consumption rather than investment.

However, the intertemporal borrowing model shown in Figure 1 above illustrates that increased consumption due to foreign aid flows would be a natural outcome of intertemporal utility maximisation. Indeed, as is explicit when the perceived role of aid is to reduce cost of adjustment to external shocks, one rationale behind the non-investment uses of foreign aid is to smooth consumption over time, which is also welfare-improving. Thus, as Deaton (1989) observes, "Saving is not only about accumulation, but about consumption smoothing in the face of volatile incomes" (p.91).

The crux of the matter in this debate is whether or not foreign aid reduces the domestic saving ratio, not only in the short-run as a part of adjustment, but also over the long-term[5]. After all, as income is a critical determinant of the saving rate, empirical investigation should concentrate on whether or not aid has contributed to income generation, rather than on the relationship between aid and savings. With regard to the effect of aid on investment, it has been argued that the "superimposed choice" of technology and an investment pattern attached to the flow of foreign aid, together with problems stemming from the fungibility of project aid and tied aid, might lower the marginal efficiency of capital.

A large number of econometric analyses on aggregate relationships between aid, saving and investment have produced inconclusive results so far. However, the debate on the effect of aid on saving and investment has been very much revived in recent literature dealing with aid effectiveness in SSA, to which we shall return again in section 5.

3. Insolvency, debt overhang and debt forgiveness

The growth-cum-debt literature reviewed above tends to concentrate on the aggregate investment- saving gap in discussing the issue of debt sustainability. In contrast, the literature that deals with the issue of liquidity and solvency of external debt focuses attention exclusively on the external performance of the economy in relation to debt service obligations, as the capacity of servicing external debt becomes of paramount

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[4] Interestingly, for dismissing the usefulness of the Financial GAP Model, Easterly (1999b) treats the following two hypotheses as predictions implied by the financial gap model: a) aid will go into investment one for one; and b) there will be a fixed linear relationship between growth and investment in the short run. By testing these predictions by using very simple regression analyses, he rejects the Financial Gap calculations. However, his test does not amount to a rejection of the role of financial aid in economic development as such.

[5] Easterly (1999b) emphasises that there is a moral hazard problem with giving aid on the basis of a "financial gap", arguing that recipient countries will have an incentive to maintain or increase the "financial gap" by low saving to get more aid. Our discussion so far provides different perspective altogether.

importance for creditors and borrowers alike in evaluating the liquidity/solvency condition.

For example, Simonsen (1985) presents the following model to derive a condition for solvency:

The first basic equation describing the dynamics of foreign indebtedness is given by,

$$\dot{D} = iD + G$$

where D is the country's net foreign debt outstanding
   i is the average nominal interest rate
   G stands for the resource gap (+) or surplus (-). (Note this definition means that a   positive resource gap represents a net capital importing position).

The equation above simply decomposes the net foreign debt increase into: i) the interest rate payment on debt stock, iD, and ii) the nonhereditary part G. Once G is treated as a well-behaved decreasing function of time and interest rate as constant, the assumed time path of these components, shown in Figure 3, generates the three phases of the debt cycle through which a country goes through from a net debtor position to a net creditor position.(i.e. from Phase I through phase III in Figure 3).

In the context of this model, a question is asked as to the condition under which a country can be in a net borrowing position without facing an insolvency issue.
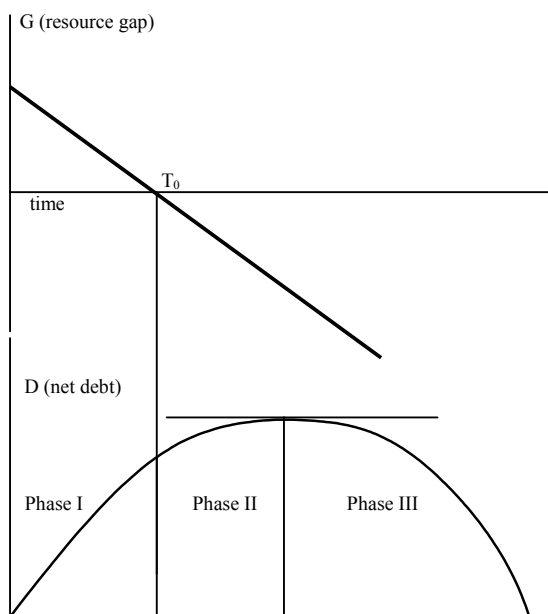
Figure 3: The time path of the debt-cycle model

To derive the required condition, the above equation is expressed in the form of the ratio of exports as:

$$\dot{z} = (i - x)z + g$$

where $z = D/X$ (debt/export ratio), $g = G/X$ and $x = \dot{X}/X$

Then, if z is to be kept unchanged, i.e. $\dot{z} = 0$, we have an equation for a sustainable resource gap as:

$$g = (x\text{-}i)\, z$$

which is positive for $x > i$. A positive value of g means that a country remains in a net borrowing position.

Thus, we arrive at a widely accepted condition for solvency: for a country to remain solvent, the growth rate of exports must exceed the rate of interest on its outstanding debt, i.e., $x > i$. In this case, resource gaps are sustained indefinitely without pushing the country into relative over-indebtedness[6].

This solvency condition is less likely to be met in a consistent and stable manner by low-income developing countries dependent on primary commodity exports, even if debt is incurred in concessional terms with very low, predictable interest payment schedules such as IDA loans. Indeed, the condition confirms the widely -accepted reality that these low-income countries would not have access to external finance offered on non-concessional terms, which are prohibitively expensive in relation to their debt servicing capacity. This reality justifying official public debt is ignored by Easterly (1999a), who argues that the "official lenders should not keep `filling the financial gap' in violation of prudential standards of creditworthiness".

Furthermore, it is important to note here that this approach to debt dynamics and the solvency condition assumes that all key variables in the model follow a smooth time-path as illustrated in Figure 3. In reality, as discussed in Section 4 below, variables determining the resource gaps and debt dynamics of HIPCs follow much more complicated and highly volatile time paths. Table A.1 (see Appendix) confirms that many HIPCs continuously face an extreme degree of volatility of key variables that engender their debt dynamics.

In the case of primary commodity exporting countries, the time path of export earnings, which is the key variable used as a denominator in calculating the debt profile in the model, is highly volatile and largely exogenously driven. While supply-side policies such as the exchange rate policy could increase export volume, this may lead to a decline in export earnings through the *fallacy of composition* effects by dampening export prices further (see Figures A.2 in Appendix for selected HIPCs). Thus, reflecting high volatility and uncertainty involved in the actual time path of

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[6] Kamel (1988) shows that if one applies a stronger solvency criterion, i.e. a country is regarded as solvent if it can ultimately repay its debt and move into a positive net asset position, the solvency condition would become: x ≥i and x >u. That is, export growth is higher than or at least equal to the interest rate, and export growth is higher than import growth.

exports, debt dynamics of these countries is highly unstable - a very different condition from the one depicted by the theoretical model above.

Maizels (1992) reveals a number of key features of the commodity price movements in the 1970s and 1980s: As shown in Figure 4(a)[7], the 1970s were characterised by extremely large short-term price variations with background of a modest upward trend in real terms. The decade is referred to as one of successive shocks to world commodity markets, driven by fears of shortages and a more general rise in commodity prices. In contrast, commodity prices in the 1980s showed a drastic downward trend with relatively small annual fluctuations. His study reports several estimates, suggesting that the general commodity terms of trade fell as much as 35 per cent between 1978-80 and 1986-88. Thus, he concludes that "the commodity price recession of the 1980s has been more severe and considerably more prolonged than that of the Great Depression of the 1930s" (op.cit, p.11). His statement is corroborated by the historical data, reproduced here in Figure 4(b)[8].
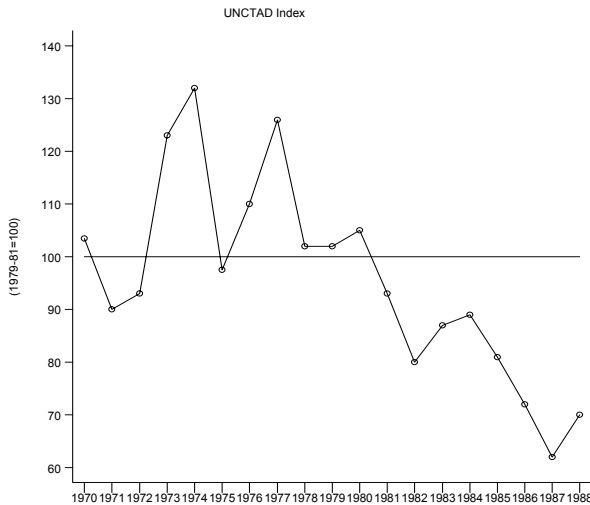
Fig. 4(a) - The commodity terms of trade, 1970-88
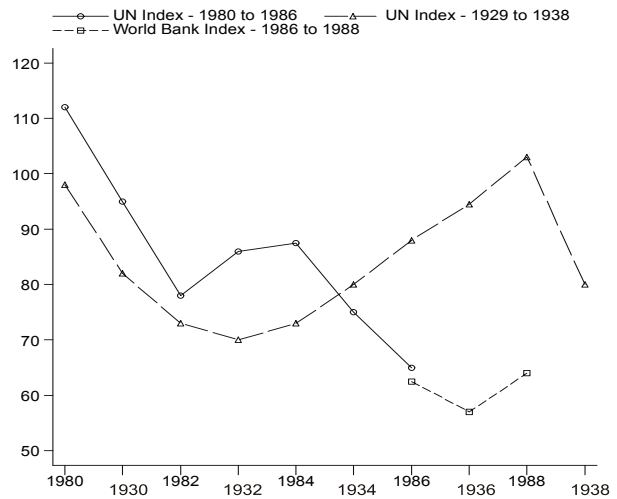
Fig. 4(b) - The commodity price recessions of the 1930s and 1980s

Figures 5(a) and 5(b) show that many primary commodity prices have been highly volatile throughout the 1980s and 1990s. The scale of adjustment required has often far exceeded the capacity of these economies to absorb volatilities through aggregate demand management, whilst dealing with associated high uncertainty and aggregate risks. Some commodities such as coffee, cocoa, tin had experienced a price decline of 60-70 % between 1980 and 1993.

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[7] The graph shows commodity price indices, which are deflated by UN index of unit values of manufactures exported by developed market-economy countries. The graph is reproduced from Fig.1.1 in Maizels(1992).
[8] The original graph is Fig.1.2 in Maizels(1992)

An implication of this kind of export price movement for country's external performance is abundant by clear. Table A-1 shows that the extremely high volatility continues to characterise all indices throughout the 1990s, affecting external performance of selected HIPC countries (terms of trade adjusted income, purchasing power of exports, export/import price, volume and value indices). For several countries, all measures for their debt payment capacity, i.e. terms of trade adjusted income, purchasing power of exports and the terms of trade, have continuously followed a sharp deterioration. In our view, it is the 'commodity crisis' of this scale that offers one of effective explanations for the protracted debt crisis inflicting commodity-dependent low income countries. This powerful story has been often <u>untold</u> or mentioned as a marginal contributing factor to the debt crisis.
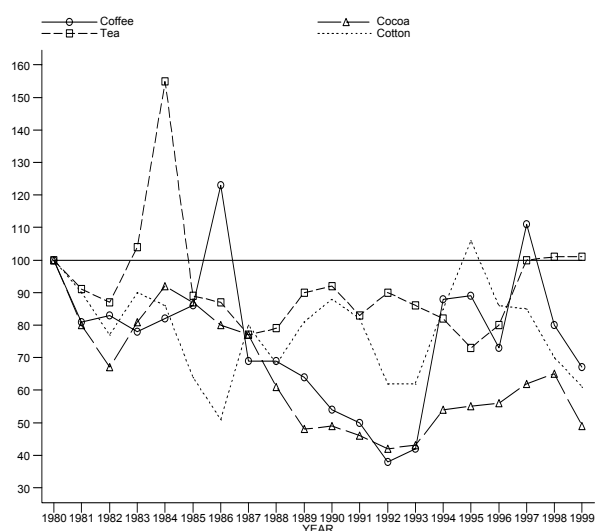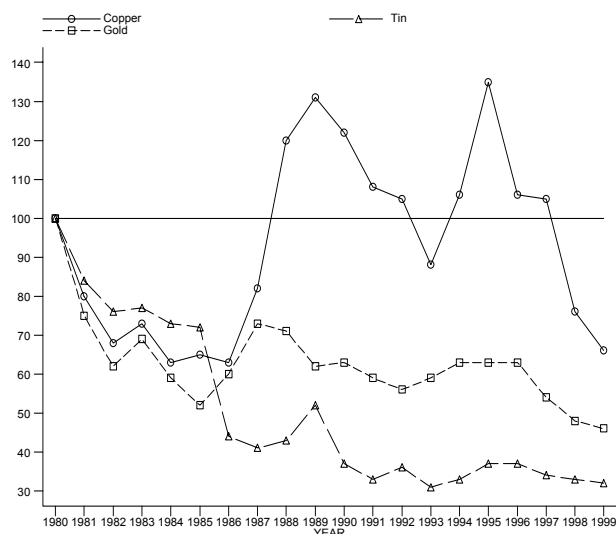
Figure 5(a)   Figure 5(b)

The beginning of debt crisis of poor countries in the late 1970 coincided exactly with that of this 'conveniently forgotten' commodity crisis. A number of commodity dependent poor countries started experiencing a series of severe liquidity crisis for debt payment in the early 1980s. Creditors judged this condition as a temporary problem and kept financing reluctantly by rescheduling debt through Paris and London club negotiations. This was an act of *defensive* lending so that their existing claims were paid at least on a regular basis. Based on the diagnosis that the third world debt crisis was a result of government dirigistre economic policy failure, creditors thought that SAPs attached as policy conditionality would arrest the crisis situation. However, despite the acceptance of SAPs by debtor countries to gain access to official aid, their debt crisis continued to deepen, given rise to a serious question as to whether the debtor countries had been facing a solvency crisis rather than a liquidity crisis.

The *solvency* constraint for the debt dynamics is defined by Eaton (1993) as the condition that 'debt in any period cannot exceed the present discounted value of the

borrowing country's stock of wealth, or future income stream'. He suggests that 'all sovereign borrowers are probably solvent in the sense that the discounted present value of their national resources exceeds the value of their national debt (op.cit. p.141). However, as Krugman (1988) notes, in the case of sovereign debt, not all of the future income stream can be made available to servicing debt and that some fraction of national income represents the maximum resource transfer, which in turn reflects both rational calculations of the cost default and internal political considerations.

Hence, Krugman points out that there is a bargaining problem between creditors, who would like to maximise resource transfer, and debtors, who would like to minimise it. The problem is usually compounded by the free rider problem, as the collective interest of creditors as a whole differs from that of any individual lender. Thus, it becomes increasingly hard for creditors to draw a clear line between a liquidity crisis and an insolvency crisis. The former condition, i.e. the difficulty in attracting voluntary new borrowings to effect repayment of existing debt, arises because of an individual lender's doubts about the solvency of debtors, as a result of her or his low expectation about their ability to pay.

Indeed, the debt stock had kept increasing over time despite repeated interest amortisation and progressive substitution of non-concessional debt for concessional debt, as the debt payment capacity of low-income countries had declined over time. Consequently, a severe *debt overhang*, i.e. the condition arising from excessive amount of debt in relation to debtor's repayment capacity, had arrived by the late 1980s. 'Debt overhang' is defined as a condition where outstanding debt is so large that investment will be inefficiently low without sizable debt or debt service reduction (Claessens and Diwan, 1989).

Claessens and Diwan (1989) recognise the two effects of the debt overhang condition: the liquidity effects and incentive effects. The former refers to the condition in which, given the burden of large external debt with extreme scarce liquidity around, both capital formation and consumption reach a minimum level after years of austerity and low income growth. The latter refers to the depressed level of both public and private investment for future growth, as a larger share of future income stream is expected to be directed for resource transfer abroad. Thus, it is admitted that the two effects combined could push highly indebted countries into a downward spiral, which would further diminish both debtor's willingness/commitment and capacity for debt payment. This is not the best outcome for creditors either, since both creditors and debtors lose.

Since debt acts as a tax on debtors' resources that deters profitable investment opportunities, the debt overhang condition is usually illustrated in a debt *Laffer curve* such as shown in Fig. 6 (Cline 1996, Krugman 1989). The concave curve traces a value of expected repayment as a function of debt outstanding: as outstanding debt increases beyond the threshold level, the expected repayment begins to fall due to the two effects discussed above. Thus, a debt relief through debt-service or debt stock reduction becomes a rational choice for both creditors and debtors, when a debtor is said to be on the "wrong side" of the Laffer curve. For example, a reduction of debt as a result of debt forgiveness is shown in a shift from D_2 to D_1 in Figure 6. In contrast,

at a lower end of outstanding debt, financing through new money would relieve a country's liquidity problem for some time. Thus, interestingly, a bargaining position tilts further in favour for debt forgiveness as debt stocks increases beyond the threshold, where the debt overhang condition begins to hit. A further right position on the Laffer curve, a major debt stock reduction becomes only a viable solution. The more dominant is the disincentive effect of debt overhang, the stronger case for debt forgiveness could be made in creditors' own interests as well.
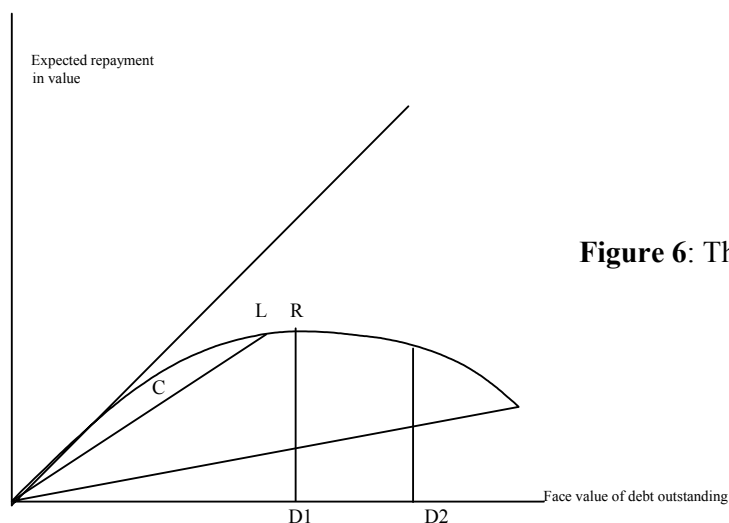
Figure 6: The debt-relief Laffer curve

Source: Fig.4.1 Cline (1996) p.163

As HIPCs' debt dynamics had evolved over the past two decades as discussed in Section 4, creditors have been finally forced to recognise this eventuality in taking the HIPC initiatives.

4. Debt Profiles of selected HIPCs

From the empirical analysis conducted on 11 HIPC countries, of which five representative cases[9] are presented in this section, we observe the following stylised facts:

1) Saving-investment (S-I), fiscal and foreign exchange gaps were all persistently large in the period 1980-1998 and in part had been widening over time.
2) Net capital transfers and grants filling these gaps were generally declining, highly volatile and grossly insufficient for initiating a self-sustainable investment-growth-saving cycle.
3) External shocks, particularly in the form of persistently declining terms of trade of HIPCs depending on the export proceeds from a small number of primary commodities, make a sustainable accumulation process very difficult.

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[9] Bolivia, Chad, Ghana*, Mali, Malawi, Mozambique*, Nicaragua, Rwanda, Tanzania*, Uganda*, Zambia* (countries with * are reported in this section)

4) As a result, external debt stocks of HIPCs had been rapidly rising over time, with large shares of new disbursements leaving the debtor countries under the guise of debt service on accumulated external debt. Accumulation of arrears, debt rescheduling and debt forgiveness had so far been inadequate for reducing accumulated debt stocks or making debtors' position sustainable.

a) Saving-Investment, fiscal, and foreign exchange gaps

HIPCs have typically extremely low domestic financing resources that they can draw from, with gross domestic saving being constantly below the level of gross domestic investment. Indeed, Figure A.1(c) shows negative saving-investment gaps over time for all five countries. There are a few instances when the S-I gap narrowed over the years, but there is evidence of a widening trend over the last decade or during recent years. The narrowed gap observed in Tanzania in the 1990s resulted from a sharp fall in investment rather than a significant rise in domestic saving. In general, domestic savings continued to fluctuate at extremely low levels, while investment was sustained largely by external finance. This reflects a fundamental feature of HIPCs, characterised by domestic mobilisation of savings heavily constrained by large shares of population with very low levels of per capita income and consumption, and low productivity of investment that fails to originate a sustainable investment-growth-saving cycle. All countries considered in our sample have registered low and volatile, or virtually zero, capacity to generate saving. In the particular case of Mozambique and Chad, savings to GDP ratios were negative up to the second half of the nineties, suggesting that aid in the form of grants was used to sustain the minimum level of consumption

Figure A1 (b) shows a pattern in the fiscal budgetary process. While the domestic revenue levels of most HIPCs, as a fraction of GDP were declining over time to lower levels comparable to those of the early eighties, Ghana and Uganda have shown some capacity to raise domestic revenue from a wider tax base. However, in the case of many HIPCs, fiscal data are notoriously unreliable, with large shares of aid flows often not included in the budgetary accounts. While the series shown in Figure A1(b) are generally drawn from IFS(2001), in the case of Mozambique such data was missing and therefore have been extracted from the WB African Database. Although such data would suggest that budgetary expenditure was much in line with domestic revenue over the period 1988-98, the high level of grants flowing into the country over the same period points to the latter covering most of the country's current and capital expenditures.

The S-I, fiscal and foreign exchange gaps were filled by the recourse to external finance, as evident from Figure A.1(a), showing the evolution of current account deficits including current income transfers and grants, S-I gaps and net resource transfers including grants. At least four common features regarding external resource flows apply to all countries:

i) Current accounts, as defined here, were persistently negative, and there is any evidence that neither foreign exchange gap nor SI-gap are narrowing over time. Current net resource transfers, almost exclusively from official creditors, and grants have been covering the ensuing capital shortages. With the exception of Tanzania and

Mozambique, where gaps and corresponding net transfers including grants have been narrowing in the period 1993-97, we observe a tendency of foreign exchange and S-I gaps to widen over time, particularly during the late nineties;

ii)Official grant flows, the main source of external finance to the HIPCs, were declining significantly during the nineties after a temporary surge in the early years of that decade;

iii)As compared to official grants, net transfers payments played a minor role, reflecting the fact that large shares of new disbursements were made to HIPCs for enabling repayment of existing debt, rather than for capital accumulation or as a cushion against external shocks. This fact is further underlined by the more detailed debt-profiles analysis given below;

iv) The high degree of volatility of net transfers and grants, suggesting a high level of unpredictability of countries' development finance resources available in years to come, reflected in new capital formation linked to the availability of external finance rather than domestic saving, as shown in Figure A.1(c).

In summary, on all three fronts, gaps were persistent and mostly widening over time, while capital inflows were channelled towards servicing of debt rather than capital accumulation.

b) External shocks – Deterioration of the Terms of Trade

With the background of such gaps, HIPCs that are dependent on the exports of a restricted number of primary commodities[10], become highly vulnerable to any volume or price shocks affecting their export revenues.

Figure A.2(a) shows the evolution of income adjusted by terms of trade[11] and the purchasing power of exports[12] since 1980. All countries experienced either a sharp decline of these indices as in Ghana or Mozambique or a high volatility as in other countries. For most countries both indices have not recovered from previous falls by 1998. Furthermore, the downturns of these indices were sharper than the upturns, and fluctuations were around considerably deeper levels than the low level they had reached already by 1980. As shown in Figure A.2(b), this trend is further confirmed by the terms of trade[13] worsening during the 1980s, and fluctuating since then around the low level reached in the late eighties (Tanzania, Uganda, Ghana) or further falling (Zambia, Mozambique).

As shown in figures A.2(c), unit value and volume of exports were negatively correlated, , suggesting that *fallacy of composition* may have effected the export revenue of their main commodities. Highly volatile export prices partly offset potentially higher export values stemming from larger export volumes. Adjustment programs designed to push export volumes at higher levels were partly undermined by adverse terms of trade effects over time. Zambia and Mozambique show most clearly the negative price effect. Although for the case of Uganda, Ghana and Tanzania the

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[10] The top three commodities represented the following percentage-share of merchandise exports in 1998: Ghana(81.2%), Tanzania(37%), Uganda(68.9%), Zambia(66.9%), Mozambique(1991: 50%)

[11] The terms of trade effect equals the capacity to import less exports of goods and services in constant prices. Data are in local currency.

[12] The value index of exports deflated by the import unit value index.

[13] The so-called "net barter" terms of trade, defined as the ratio of the export unit value index to the import unit value index.

positive volume-effect was dominant, the latter contributed to an extreme volatility of export proceeds. Year to year changes in export values were often as high as 40-50%, contributing in a determinant way to the underlying unsustainability of both current balances and external indebtedness.

Figures A.2(d) shows import unit value, volume and value of imports. Ghana and Uganda display an increasing capacity to import over the nineties, reflecting both rising export proceeds and policy-driven efforts to raise investment financed by external sources. In the case of the remaining countries, imports were as volatile as exports, underlying the tight link between export performance and import capacity, which had not been eased by a sufficient amount of development finance from abroad.

For countries depending almost solely on the proceeds of the few commodities exported to the world markets, fluctuations of this magnitude represent major shocks, in terms of forgone income and foreign exchange earnings, that are impossible to deal with if contingency finance is not made immediately available. In the absence of such a facility, refinancing and rescheduling of debt and accumulation of arrears represented the only mechanisms avoiding shock-ridden debtors to default on debt service falling due.

C) Unsustainable external debt stocks

Figures A.3(a – d) show the evolution of the countries' debt profiles. It can be seen, from Figure A.3(a), which presents disbursements of new debt, total debt service, and total net transfers, that all countries were sharing a common trend of declining and volatile net transfers since the early nineties. The volatility of net transfers reflects the volatility of disbursements, rather than actual debt service, which shows a far smoother pattern. In fact, countries usually service the amount of debt that they are able to, while new disbursements widely depend on the vagaries of donors and recipients' readiness to accept the burden of conditionalities attached to new loans.

From a comparative analysis of the debt dynamics of the countries considered some significant differences clearly emerge. Ghana and Uganda, the biggest HIPC-economies in the sample, have registered higher net transfers-exports ratios over time, as compared to Mozambique, Tanzania, and Zambia. Since the early nineties, net transfers to the latter two countries were, respectively, virtually zero or negative. In Zambia - an extreme case - new disbursements entering the country on the one side directly exited as repayment of existing debt on the other side, detracting actually from the countries' already scarce financial resources. Thus it appears that countries received a rather different treatment in terms of external transfers of funds.

Figure A.3(b) offers a closer look at the composition of net transfers, broken down by type of creditor and flows. In the case of Zambia, negative net transfers have been the result of debt service of bilateral and private public and publicly guaranteed debt in excess of new disbursements, and of repurchases of obligations to the IMF during the nineties. Negative net transfers were partly offset by positive transfers from multilateral creditors.

Figure A.3(c) show how the burden of debt servicing became for most countries unsustainable over time. Zambia, for instance, over almost two decades managed to fully service its debt only in 1980. Other years, particularly from 1987 onwards were characterised by the accumulation of arrears and later, starting in 1990, by rescheduling of principal and interests, largely in excess of debt actually serviced. Debt service had clearly been widely unsustainable for a long time, before eventually a disbursement of new funds in excess of US$2.5 billions was agreed (disbursed by bilateral creditors and the IMF, after Zambia had signed a three-year ESAF program with the IMF) for servicing part of the existing debt stock (giving priority to the repayment of accumulated arrears of IMF-obligations). Certainly, this did not represent a solution of Zambia's soaring external debt stock, which continued to fluctuate at around US$ 7 billions up to 1998 (Figure A.3(d)), with more than 90% of Zambia's debt stock being owed to official (bilateral and multilateral) creditors. There are some instances of years in which parts of interest and principal falling due have been forgiven (1988 to 1994), but the importance of such interventions was far too low for causing any significant amelioration in the sustainability of external debt.

Another representative case of debt-unsustainability is Mozambique. Similar to Zambia, bilateral net transfers used to be positive, though declining during the eighties, and turned increasingly negative over the following decade (note the US$ 349 million debt service to bilateral creditors in 1998) . Nevertheless, during the same decade Mozambique registered increasingly positive net transfers from the multilateral creditors. The degree to which servicing of debt had become unsustainable particularly since 1990 is shown by the large share of debt rescheduled and accumulated into arrears to amounts well in excess of actual debt service paid. As a result, the burden of an external debt stock reached US$ 8 billion in 1998, without having decreased not even one year during the period 1980-1998 (Figure A.3(d)).

While Tanzania's debt profile looks similar, Ghana and Uganda present a rather different case. The debt servicing capacity of these two countries had been increasing over time, and debt service due was largely paid, with a much lesser proportion accumulating into arrears or being rescheduled. Nevertheless, new disbursements were high and in the case of Uganda increasing over time. Since debt service by both countries was also rising, actual net transfers were fairly stable in the case of Uganda and lower and also more volatile in the case of Ghana. New disbursements mainly originated from multilateral lenders' structural adjustment loans. Although new debt was increasingly contracted at concessional terms, hence raising the share of debt on concessional terms by 1997 to almost 80% in the case of Uganda, and to approximately 67% for Ghana, total external debt stock rose to increasingly unsustainable levels over time. Uganda was forgiven interest payment in excess of US$ 500 million through its involvement in the HIPC initiative since its first launch in 1996. Nevertheless, its total external debt stock has never stopped rising to yet higher levels.

In summary, HIPCs have been suffering from the burden of a persistent and mounting debt overhang since the mid eighties, and have never been able to recover since, not even temporarily. Debt workouts, particularly those initiated by Paris club creditors since the mid-late eighties, have been far from effective in offering these countries a permanent solution to the problem. This is because, in relation to the size of

accumulated stocks, rescheduling and debt stock forgiven involved marginal amounts of debt. Moreover, facilities were made available *ex-post*, and only at a point where debtors were clearly unable to meet debt service obligations. Both theoretical arguments, as discussed in the previous sections, and historical analysis above, strongly underline the need for countries to be offered an alternative mechanism to deal with recurrent external shocks.

5. Evaluation of the HIPC initiatives

Over the past two decades, the debt relief mechanisms have evolved through several stages from short-term nonconcessional rescheduling in the post-1982 period, through refinancing with new loans at more concessional terms in the Toronto and "enhanced" Toronto terms, relief with some debt reductions in the Naples terms, finally to the "HIPC I Initiatives" in 1996 and the enhanced HIPC II initiatives in 1999.

Killick and Stevens (1997) present a comprehensive assessment of the traditional debt relief mechanisms applied to low-income countries against a set of efficiency criteria in terms of adequacy, productivity, transaction cost and transparency. In almost each criterion listed the pre-HIPC mechanisms were assessed inefficient. They are found to be applying short-leash mechanisms for dealing with mounting debt problems, thus burdened with the inadequacy of the relief provided and the need for repeated rounds of negotiations.

Despite major efforts to alleviate the debt burden, the main debt indicators deteriorated with a series of convulsions. A question has been raised repeatedly as to why the debt burdens of poor countries remain so onerous. In our view, one of the answers to this lies in the reluctance of the donor community to grapple effectively with commodity price shocks or terms of trade shocks - one of the critical factors shaping debt dynamics. Killick and Stevens (1997) have made many recommendations for raising efficiency of debt relief measures by noting, among other things: i) provision for possible supervention of external shocks by distinguishing between temporary vs. long-lasting shocks; and ii) more flexible mechanisms for larger and severer shocks (op.cit, p.147).

The HIPC initiatives addressed many of drawbacks of the traditional debt relief mechanisms. The new features are summarised as follows (see Killick and Stevens (1997), Killick (2000) and UNCTAD (2000b) for a more detailed discussion and critical assessment):

a) the treadmill of repeated debt negotiations are avoided by setting up a Trust Fund with multilateral lenders from contributions by Paris Club creditors. The use of this fund is contingent on maintaining the level of IDA lending by the World Bank. Additional resources are also supposed to come from IMF gold sales;

b) effective debt relief is, for the first time, extended to multilateral debt;

c) debt reduction is specifically aimed at reaching an explicit target for debt sustainability, determined by country-specific debt sustainability analysis. The targets were lowered progressively from the HIPC I to the HIPC II;

d) the content of policy conditionality has been changed to include the goal of poverty reduction, while a good track record of good performance under IMF-and World Bank-supported structural adjustment programmes remains firmly as an eligibility criterion.

Despite significant improvements made on the traditional mechanisms, the HIPC initiatives still contain several pitfalls. In our view, the remaining problems are of quite fundamental nature; unless these issues are genuinely addressed, prevailing optimism regarding the HIPC initiatives' capacity to deliver a durable exit route for debt burden of most of the HIPCs cannot be justified.

Firstly, the Initiatives may easily become under-funded if the debt dynamics of these HIPCs continues to exhibit an extreme degree of volatility. In this regard, the debt sustainability analysis conducted for forecasting future requirements for debt relief is often based on overoptimistic scenarios regarding future debt servicing capabilities (Killick and Stevens, 1997 and UNCTAD 2000). We have made some preliminary analysis to examine the sensitivity of the projected targets of debt serving capacity under the HIPC initiatives against alternative projections based on the past records of export growth for six HIPCs, as shown in Figure A.4[14]. In most cases, the projected debt path is very close to the alternative estimates based on either the higher end of export growth rate or the average growth rate achieved over the last two decades. In this sense, as Martin and Alami (2000) note, these projections should be regarded as optimistic targets rather than projections as such.

However, a more serious concern can be raised about the failure of these projections to take into account the very high volatility continuously exhibited by key variables determining HIPCs' export performance and debt servicing capacities. Thus, the absence of sufficient provisions to deal with external shocks is one of the remaining fundamental weaknesses of the HIPC initiatives. The lack of financial resources to tackle the emerging shortfalls could lead to a further trade-off in allocation of donor resources between aid budgets and debt relief financing.

Secondly, there is a considerable tension and potential contradictions between the different components of new policy conditionality embedded in the HIPC initiatives. With the 'eligibility' criteria still firmly in place, the underlying assumption of the HIPC policy conditionality is presumably that there exist complementarities between Structural Adjustment Programmes and additional policies aimed at poverty reduction. However, economic literature has long recognised that the growth-poverty nexus is rather complicated, and the *pattern* of economic growth and development, rather than the rate of growth per se, has significant effects on a country's income distribution and poverty profile. This suggests that 'growth-enhancing economic policies' of SAPs are not necessarily in agreement with policies for addressing the income distribution issues and poverty alleviation targets.

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[14] Projections of total debt service (TDS) to export ratios is calculated by dividing IMF TDS-projections as published in HIPCs' decision point documents by the initial-year balance of exports of goods and services augmented by the growth rate of exports observed over the period 1980-1998. Average growth rate of exports is used for projecting the average scenario. Average +(-) standard deviation/2 of historical export growth rates form the denominator for best and worse scenarios, respectively.

Thus, simply appending the poverty reduction strategy to the Structural Adjustment Programmes without due attention to this complex growth-poverty nexus can be problematic, giving rise to internal inconsistency of the policy package. Furthermore, PRGS country papers suggest that poverty reduction is supposed to be achieved almost exclusively through an increase in social expenditure. While these policy measures are undoubtedly important elements of any poverty reduction strategy, an unfounded expectation that poverty could be reduced by applying these measures only should not be encouraged. This is because poverty is outcome of economic, social and political processes and their interactions, which are mediated through a range of institutions (World Bank 2000d). The multidimensional nature of poverty implies that any poverty reduction strategy should include a set of long-term strategic measures of changing institutional structures and environments.

Thirdly, the effectiveness of the use of policy conditionality in the HIPC initiatives should be evaluated more carefully, in the wider context of appropriateness of SAPs to effect structural transformation of economies of HIPCs that could lead to changes of their disadvantaged form of international linkages. In our view, the conventional way of debating the effectiveness of policy conditionality is too inhibiting, as it is based on the assumption that SAPs are generally appropriate for dealing economic problems facing the HIPCs. Furthermore, policy conditionality is seen as a means of tying the hand of recipient governments to policy reforms designed by the donor community. Therefore, the debate has been conducted largely from a narrow perspective of the moral hazard problem arising from granting debt relief and foreign aid without a firm commitment to reform programs on the part of recipient countries.

Collier (1998), for example, argues that policy conditionality attached to SAPs is faulted on incorrect rationales given to adjustment lending. In his view, none of the three rationales for programme lending, namely the use of aid as an incentive for reform, financing the 'cost of adjustment', and 'defensive lending' to service external debt, are soundly based.

With recognition of this reality, Collier proposes to redesign conditionality from 'incentives' based on promises for policy change to 'selectivity' based on retrospective assessments of performance. That is, in place of using conditionality to induce policy change, Collier proposes that aid should be used to target financial flows on those governments that have already established good policy environments. His proposal is based on the empirical work by Burnside and Dollar (1997), which suggests that 'when good policy and aid flows happen to coincide the outcome has been very good (p.30). It also originates from Collier's conviction that Africa desperately needs significant 'role models' within the continent. Thus, creating star performers by engineering aid allocation in this way, he argues, would induce many non-reforming governments to change their policies through the pressure of emulation and would result in enhanced overall aid effectiveness.

However, Hansen and Tarp (2001) question the validity of the empirical analysis by Burnside and Dollar, which forms the basis for the 'selectivity' proposal. Their extensive literature survey, extending to three generation of models on the aid-growth relationships, confirms that aid enhances growth through the positive effects of aid on

domestic savings in the framework of first generation studies, and on the investment enhancing effect of aid investigated in second-generation studies.

Furthermore. their critical review of the third generation models based on new growth theory, which include the Burnside-Dollar study, shows that the results by Burnside and Dollar are an odd-one out from the other three studies. While all other three studies suggest a significant impact of aid on growth as long as the aid to GDP ratio does not exceed 25 % or more, only the former study concludes that the effectiveness of aid depends on economic policy. Overall, in each generation of studies, those arguing the negative effect of aid on growth are in a minority. Hence, they caution us strongly against basing aid allocation rules on the single-cause explanations.

We argued elsewhere (Nissanke 2000), the 'selectivity' proposal in aid allocation requires a critical examination in the light of possible consequences of adopting it on aid distribution as well as the special roles attached to official bilateral and multilateral aid flows in a web of global finance. While private capital flows by nature move globally in search of higher rates of return, criteria and motivation surrounding aid distribution have been historically much more complex (Maizels and Nissanke 1984)., Noting that "aid is given for many different purposes and in many different forms", Hansen and Tarp (1999) suggest that the unresolved issue in assessing aid effectiveness is not whether aid works, but how and whether we can make the different kinds of aid instruments at hand work better in varying country circumstances. Furthermore, unless structural transformation gets firmly under way, a 'star performer' in Africa continues to shift from one country to another, as Ghana found it difficult to maintain its status as a 'front-runner in adjustment' attained in the early 1990s (Aryeetey, Harrigan and Nissanke 2000).

The 'selectivity' proposal should be also examined in relation to a more fundamental question as to who defines (and how to define) good policies for country-specific conditions. We suggest the appropriateness of the design of policy conditionality attached to the HIPC initiatives to be re-evaluated in this context. Stein and Nissanke (1999) suggest that an uneasy mismatch exists between the abstract model in which SAPs are conceived and the reality found in HIPCs. In our view, the slow progress with SAPs in reviving HIPCs by inducing substantial changes to the structure of trade and production is more to do with this fundamental problem of the theoretical construct, rather than the weak implementing capacity of African states or institutions in carrying through Structural Adjustment to its perfection and completion.

The HIPC initiatives are praised for being based on the improved donor-recipient relationships, involving recipient governments and civil societies at large in drafting and debating the poverty reduction strategy papers (PRSPs). However, unless genuine debate can be extended to another component of policy conditionality, i.e. the design of structural adjustment programmes, real ownership of economic reform programmes cannot be in the hands of recipient countries.

Instead, given the reality that foreign aid and concessional loans are in short supply. it is more likely that the granting debt forgiveness through the HIPC facilities becomes a convenient de-facto rationing device for aid allocation on the basis of the 'selectivity' principle.

6. Conclusions

Our theoretical analysis and empirical examination of debt dynamics of HIPCs show that one of the major conditions, which has made their external debt unsustainable and, hence, given rise to the protracted debt crisis over the last two decades, is their extreme susceptibility to large-scale external shocks such as the terms of trade effects. Above all, there is an urgent need to reduce short-term commodity market instability through revitalising a comprehensive North-South programme. (Maizels 1992, Chapter 15). Debt relief measures should be examined in this broad policy context.

Past and existing debt relief mechanisms, including the HIPC initiatives, have been failing to pay sufficient attention to the debilitating condition facing many commodity-dependent developing countries. In particular, the effective and flexible facility of *contingency financing* to deal with external shocks on an *ex-ante* basis has been absent. Instead, official creditors have kept applying *ex-post* debt relief mechanisms in response to recurrent liquidity crises and the ensued debilitating 'debt overhang' condition, with firm belief that Structural Adjustment Programmes attached as policy conditionality would bring about structural transformation of these economies required to overcome this condition.

The existing contingency financing facilities at IMF such as the Compensatory Financing Facility (CCF) or Contingency Credit Line (CCL) are not much of help to HIPCs. Apart from the fact that high conditionality has been historically applied to these facilities, CCL is not available to a country which uses any other facility such as PRGF, while CCF is provided on non-concessional terms, hence too expensive for utilisation (Martin and Alami 2000).

In our view, it is critically important to establish genuinely flexible, *state-contingent* debt relief mechanisms in order to avoid the recurrence of debt crisis, which has stalled economic development of low-income countries for so long. Krugman (1988) suggests that trade-off between debt forgiveness and financing in a typical negotiation can be improved by indexing repayment to the state of nature. His theoretical model shows that debt relief schemes, by which repayment is linked to some of measure of the state of nature is much more efficient compared to the schemes by which repayment is linked to ability to pay. This is because the state-contingent schemes could make a distinction between the consequence of a debtor's own efforts and events outside its control.

Although Cline (1996) dismisses Krugman's proposal to use state-contingent instruments as impractical on the technical ground, the recent advancement in the *contract* theory field of financial economics points to a promising possibility to tackle with this technical impediment. Drawing an efficient, state contingent debt contract could be made within our technical capability, if we invest sufficient efforts in turning this possibility into reality. What is lacking now is the full recognition and appreciation of one of key conditions in shaping HIPCs' debt dynamics and the political will and commitment to realise this possibility.

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TABLE A.1 - Volatility Indicators*

	Bolivia 80-97	Bolivia 80-89	Bolivia 90-97	Chad 80-97	Chad 80-89	Chad 90-97		Ghana 80-97	Ghana 80-89	Ghana 90-97	Malawi 80-97	Malawi 80-89	Malawi 90-97
ToT-Adjust. Inc.	63.3	31.6	94.7	43.4	22.1	62.8	ToT-Adjust. Inc.	54.1	19.8	66.5	66.7	37.2	77.4
Purch.Pow.-Exp.	14.9	15.9	14.1	29.0	29.5	28.9	Purch.Pow.-Exp.	103.7	98.0	28.5	18.0	14.5	20.4
Terms of Trade	29.5	18.4	10.3	11.6	8.2	10.8	Terms of Trade	26.8	23.9	5.4	18.1	16.2	13.6
Export Volume	29.7	16.5	8.6	30.7	33.6	24.2	Export Volume	83.0	92.2	27.6	18.8	14.2	10.0
Export Unit Value	21.8	17.7	13.0	16.6	14.9	10.0	Export Unit Value	39.3	55.9	6.9	15.0	12.8	13.7
Export Value	22.21	17.89	18.75	39.7	33.5	30.0	Export Value	35.9	28.3	30.7	28.7	10.1	19.7
Import Volume	32.3	19.8	24.5	31.4	32.4	29.2	Import Volume	79.5	92.9	35.1	21.5	16.6	18.2
Import Unit Value	12.3	6.3	7.8	23.3	18.4	10.5	Import Unit Value	46.3	63.3	3.4	19.2	13.7	2.8
Import Value	58.19	17.61	53.88	29.9	34.0	22.8	Import Value	59.5	27.6	37.2	35.9	23.7	18.1

	Mali 80-97	Mali 80-89	Mali 90-97	Mozambique 80-97	Mozambique 80-89	Mozambique 90-97		Rwanda 80-97	Rwanda 80-89	Rwanda 90-97	Tanzania 80-97	Tanzania 80-89	Tanzania 90-97
ToT-Adjust. Inc.	45.0	16.5	74.1	63.4	40.7	73.3	ToT-Adjust. Inc.	56.2	69.1	42.6	.	.	62.0
Purch.Pow.-Exp.	37.7	16.5	23.0	46.0	55.0	9.5	Purch.Pow.-Exp.	31.2	22.3	40.2	27.4	29.1	26.6
Terms of Trade	7.3	5.1	7.1	26.3	8.5	21.9	Terms of Trade	25.4	29.5	19.5	17.3	10.0	4.6
Export Volume	43.7	17.6	27.0	38.8	49.2	23.7	Export Volume	39.2	28.5	46.5	32.8	25.8	27.2
Export Unit Value	11.9	12.6	8.3	18.0	9.6	22.2	Export Unit Value	19.9	20.1	17.5	7.6	7.4	8.1
Export Value	46.0	22.9	21.3	40.8	55.7	11.8	Export Value	35.0	16.0	42.3	34.0	29.1	29.2
Import Volume	22.2	12.9	14.2	15.6	16.6	15.4	Import Volume	29.0	17.9	36.7	18.7	23.8	11.5
Import Unit Value	13.8	13.7	4.1	16.5	11.9	8.0	Import Unit Value	22.7	12.5	27.6	15.7	9.5	5.5
Import Value	32.4	19.0	16.0	20.1	20.9	11.0	Import Value	21.8	15.1	28.1	24.2	21.4	12.9

Memorandum Items:

	Uganda 80-97	Uganda 80-89	Uganda 90-97	Zambia 80-97	Zambia 80-89	Zambia 90-97	Commodity Prices (volatilities)	80-97	80-89	90-97	Export Growth (volatilities)	80-99	80-89	90-99
ToT-Adjust. Inc.	73.7	47.9	99.1	47.3	46.3	31.9	Coffee	27.9	20.7	38.5	Zambia	6.5	-2.6	2.9
Purch.Pow.-Exp.	50.7	46.3	56.5	32.2	27.4	21.6	Cocoa	27.0	19.7	13.8	Rwanda	15.1	5.3	79.9
Terms of Trade	54.3	38.1	18.5	25.1	29.1	15.3	Cotton	18.0	18.3	17.5	Chad	5.5	4.7	6.1
Export Volume	54.0	20.8	51.7	19.4	14.1	15.3	Tea	18.6	23.3	9.6	Bolivia	2.5	3.3	1.5
Export Unit Value	32.6	14.5	19.2	22.8	21.9	17.9					Ghana	2.7	11.7	1.1
Export Value	39.2	19.3	56.9	22.2	24.9	19.5	Gold	18.4	19.4	6.0	Malawi	3.4	5.7	2.2
Import Volume	56.4	37.6	59.7	31.3	22.2	27.9	Copper	24.1	26.7	12.4	Mali	1.3	1.5	1.3
Import Unit Value	31.4	44.5	3.7	24.6	27.0	8.8	Tin	42.7	30.3	6.7	Mozamb.	3.3	-2.6	0.5
Import Value	63.3	24.5	60.5	26.4	29.5	21.8					Tanzania	.	.	2.2
											Uganda	1.7	3.4	1.2

(*) Sources: All data from UNCTAD(2000), except Terms of Trade Adjustment from World Bank(2000a)   -   Volatility indicators are calculated as the standard deviation/mean ratio of Index numbers with base year (1990).

TOT-Adjust.Income series were converted into Index numbers for matter of comparability (1990=100).

GHANA – Figure A.1
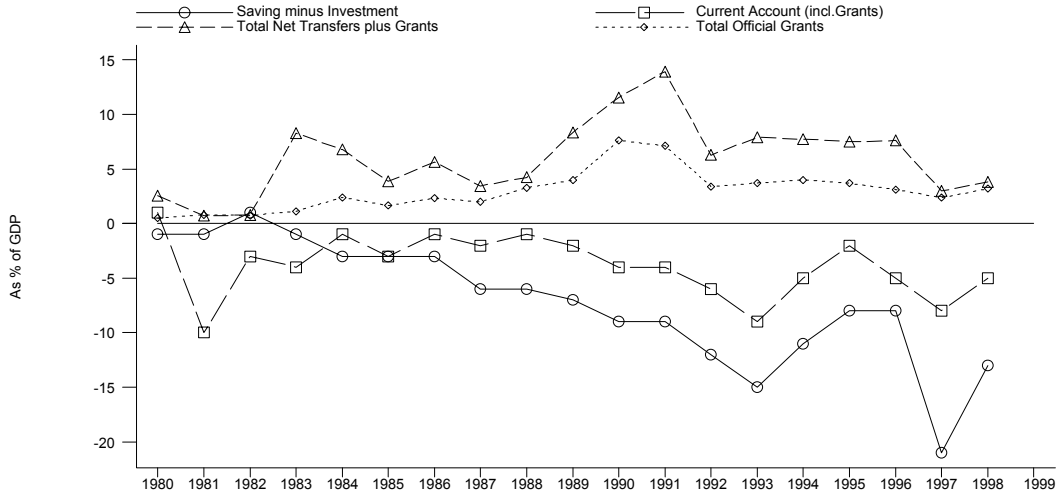
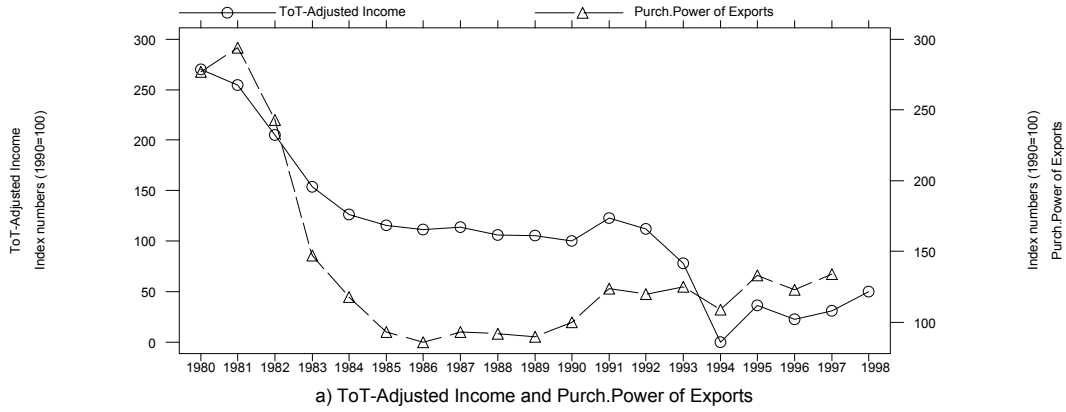a) Saving-Investment Gap and Current Account Def. with External Flows
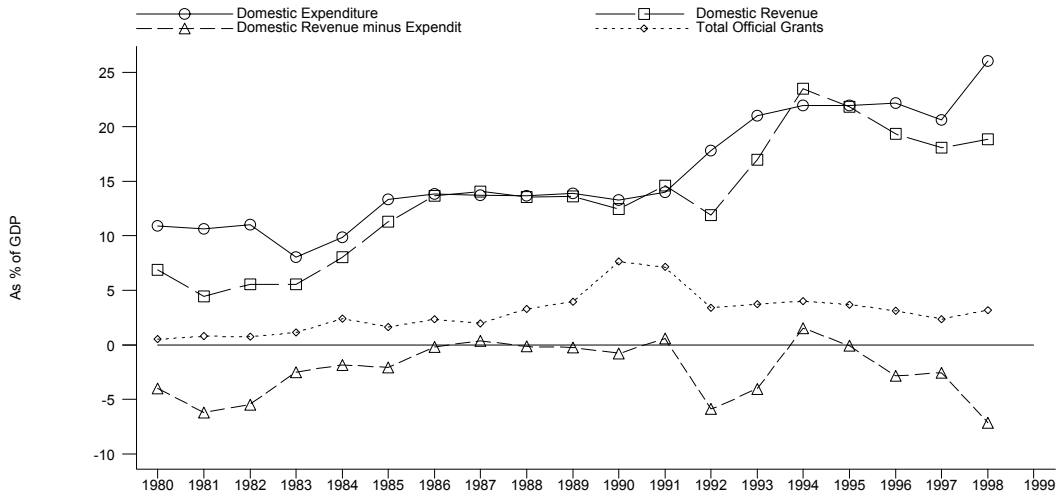
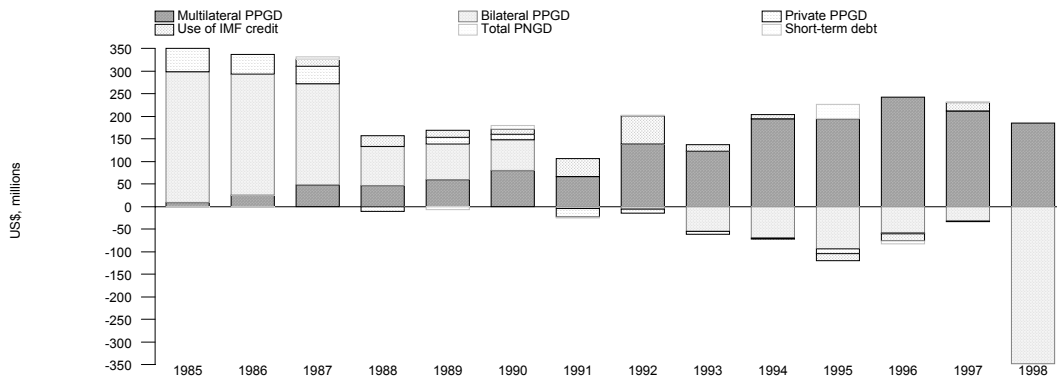b) Fiscal Gap and Official Grants
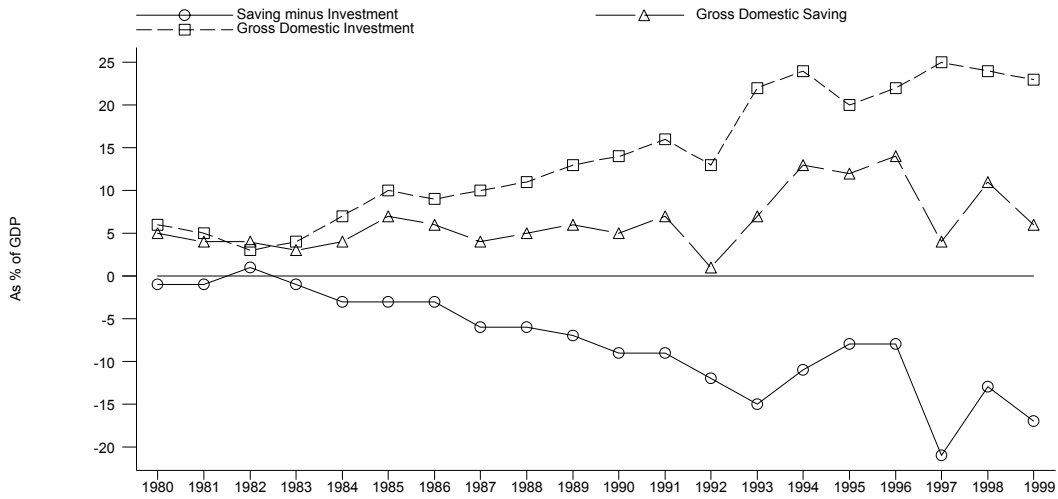
c) Gross Domestic Saving, Investment

GHANA – Figure A.2
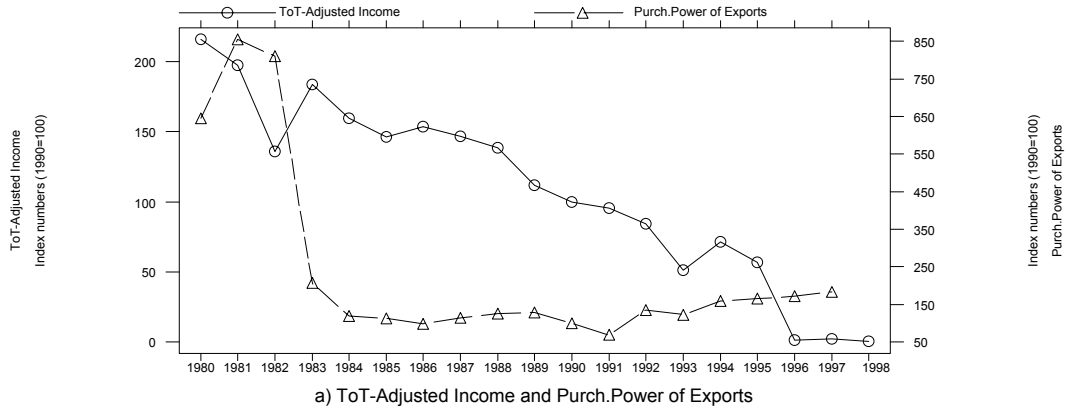
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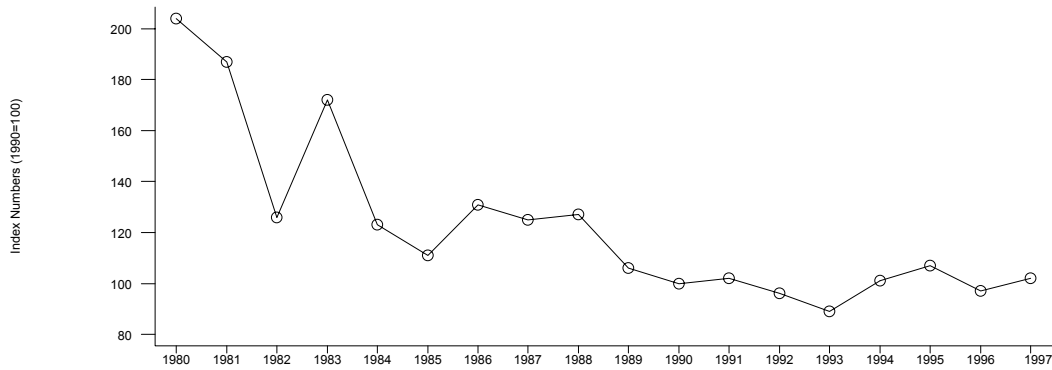
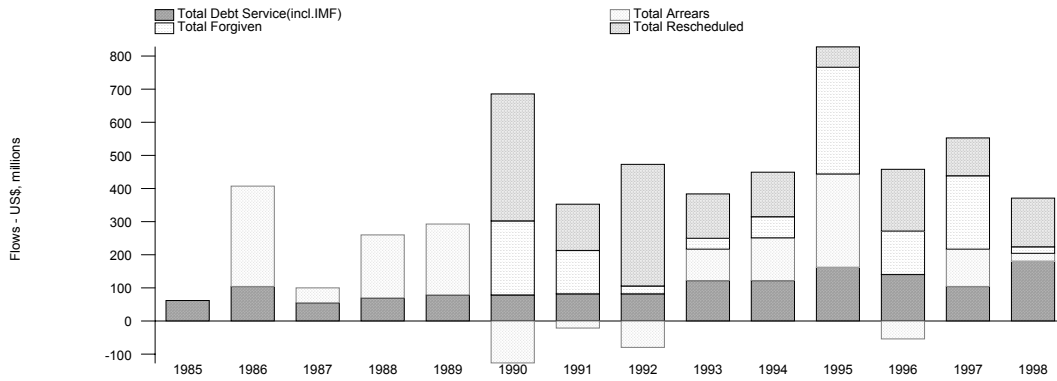b) Terms of Trade
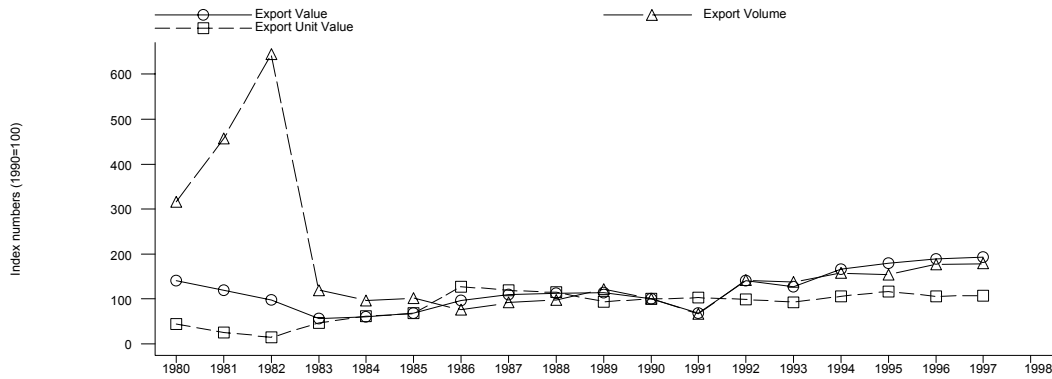
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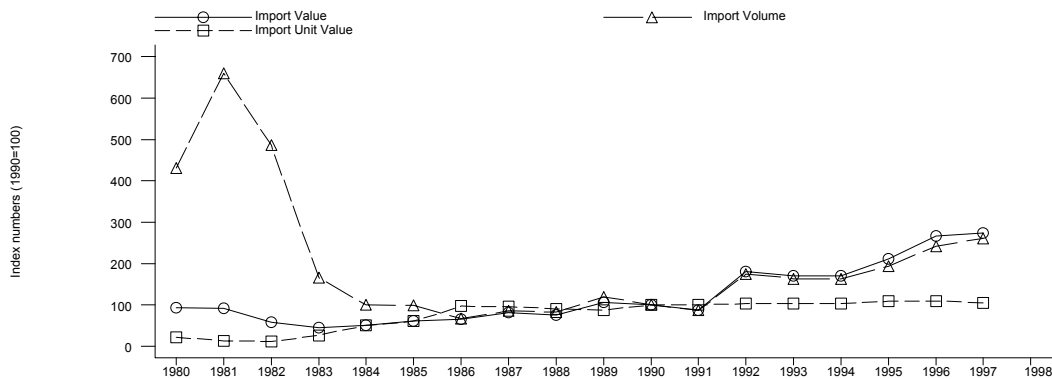
d) Import Values and Volumes

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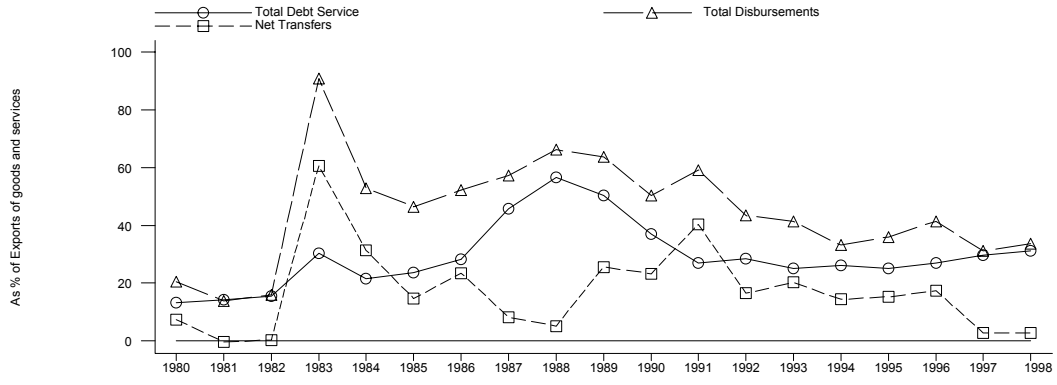
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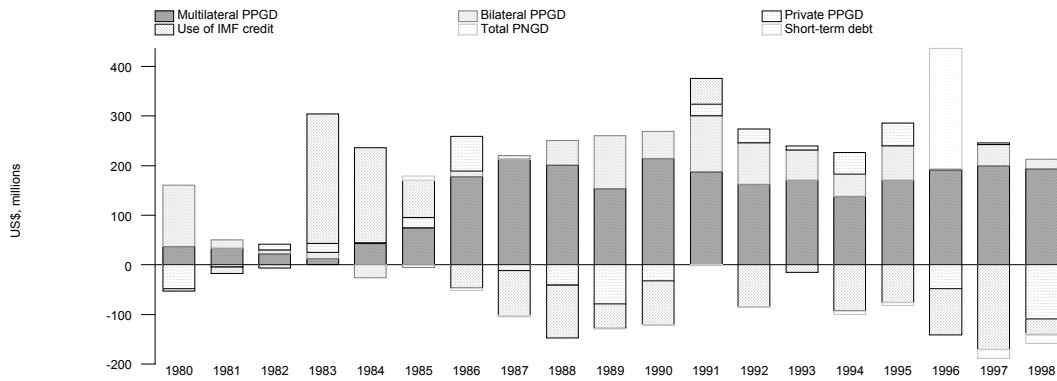
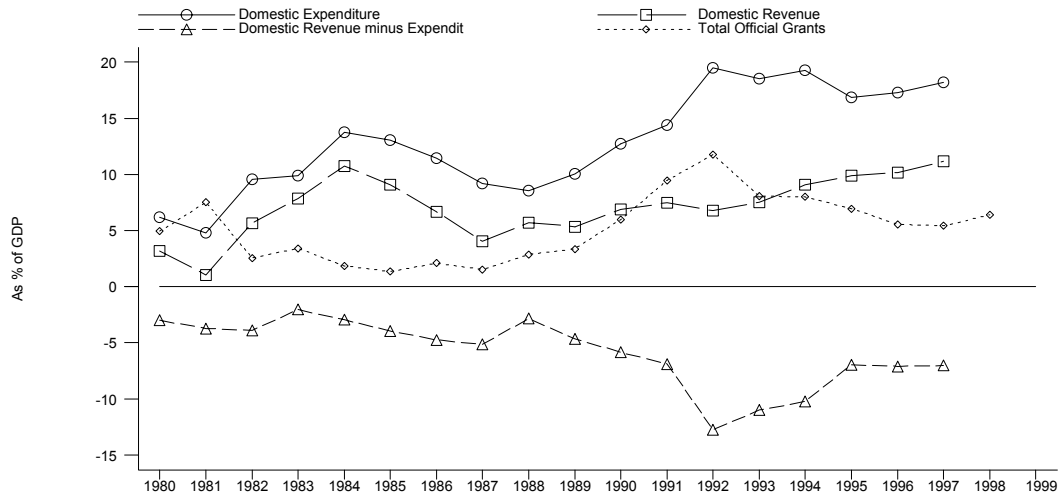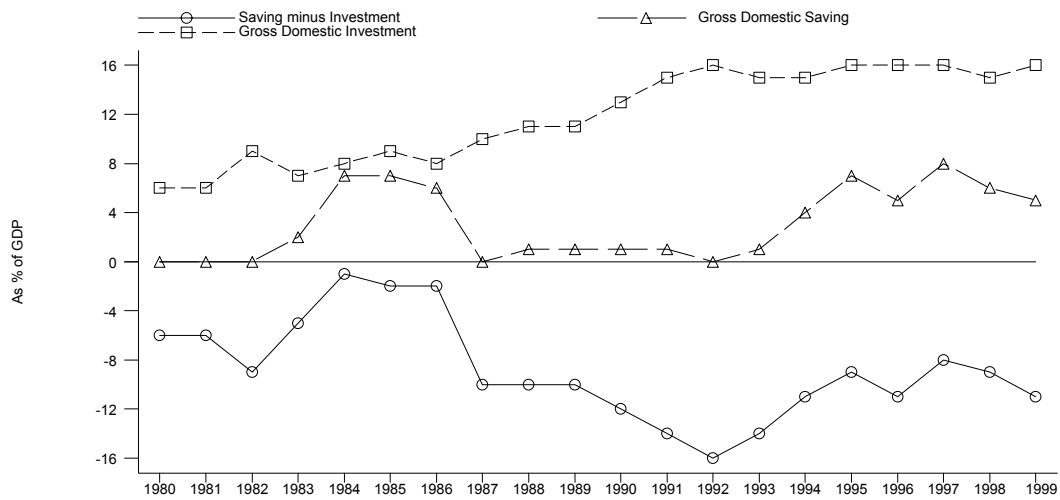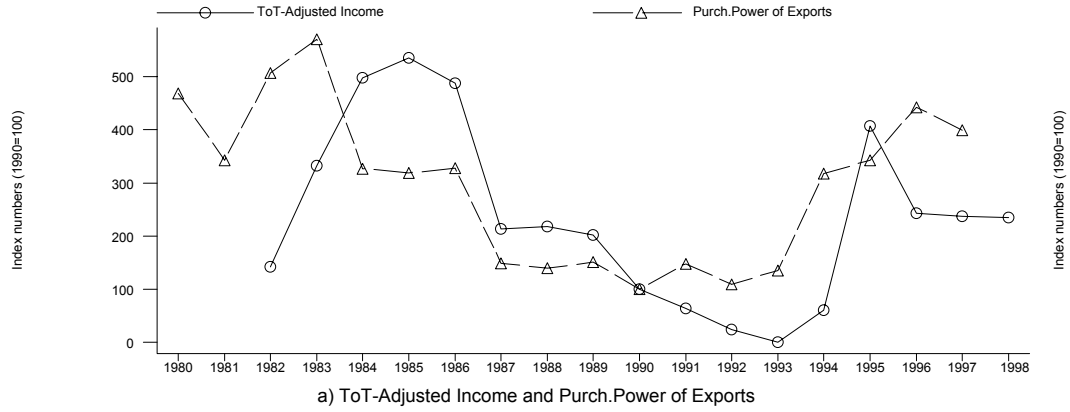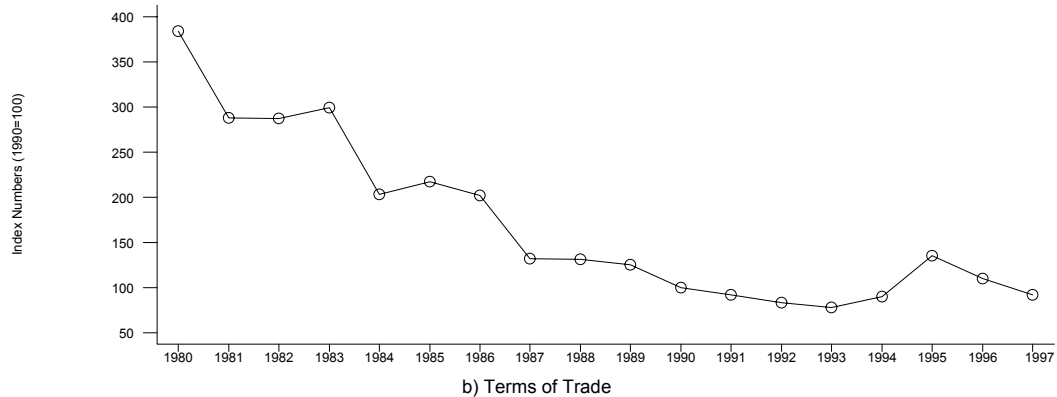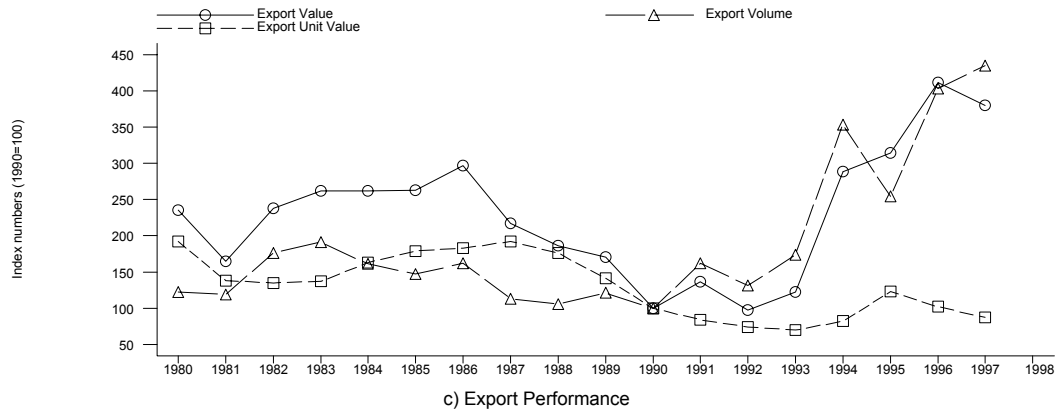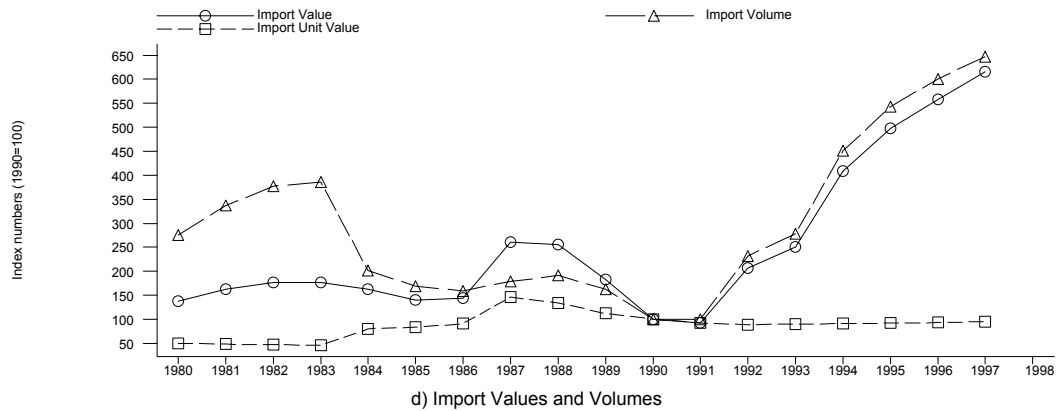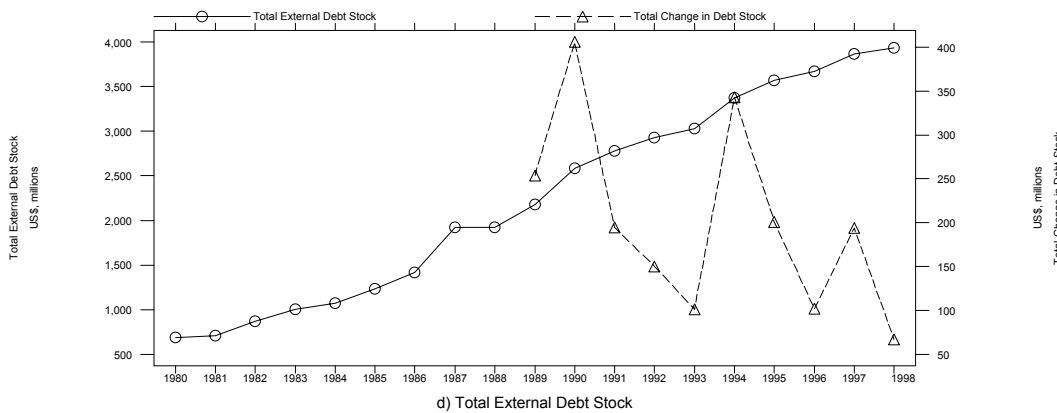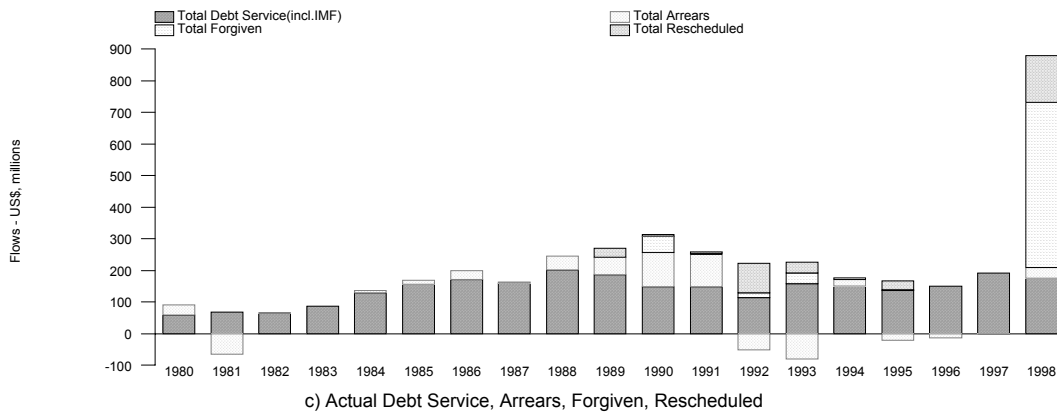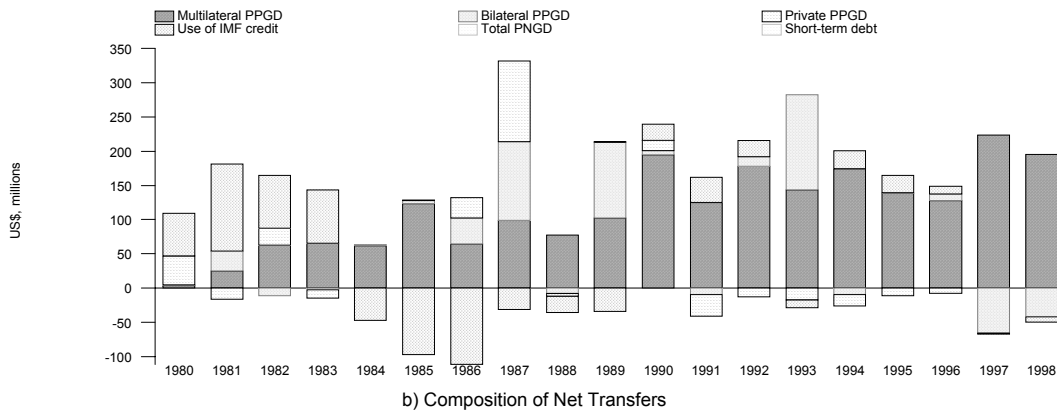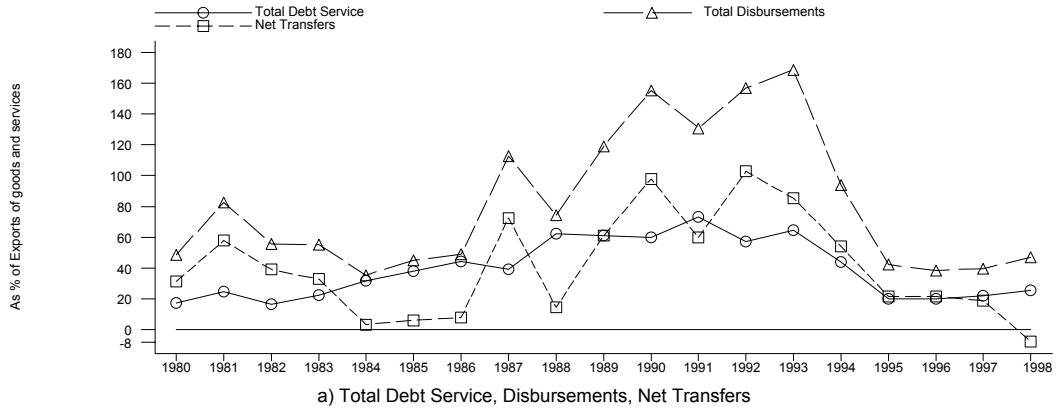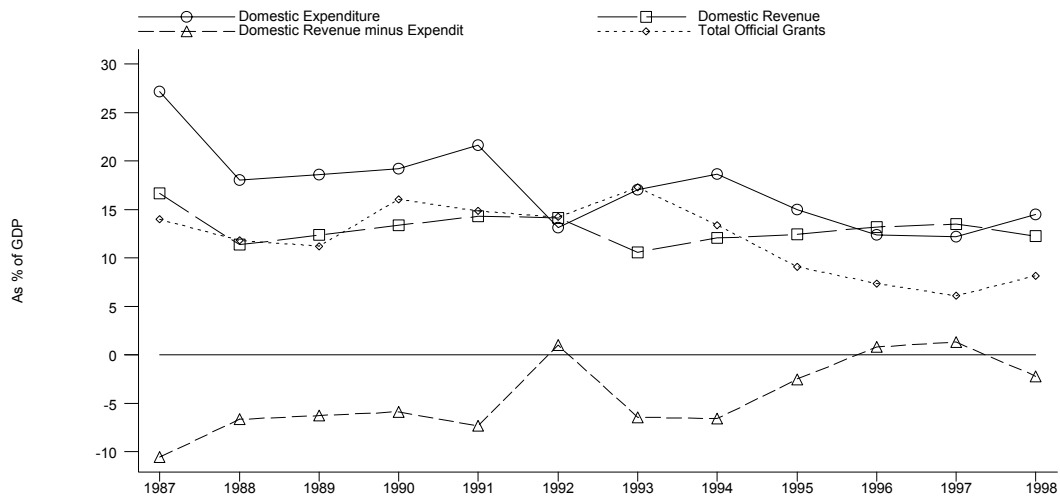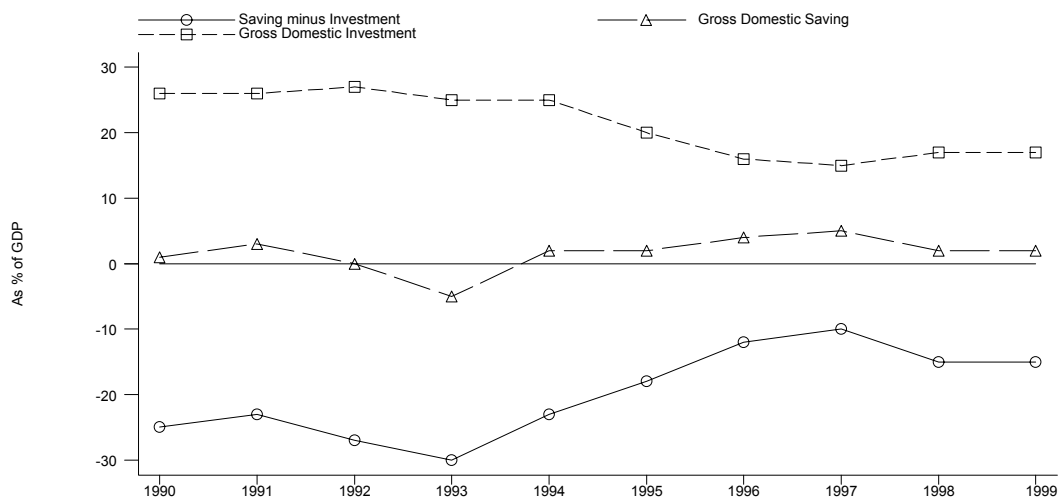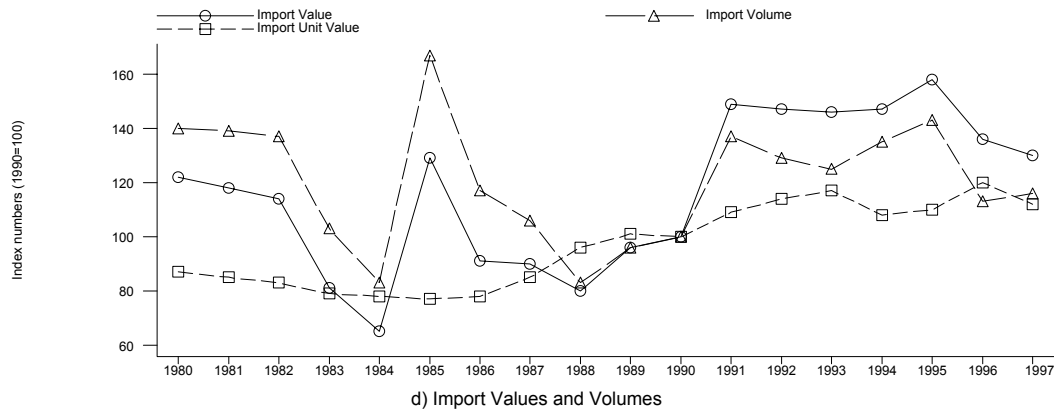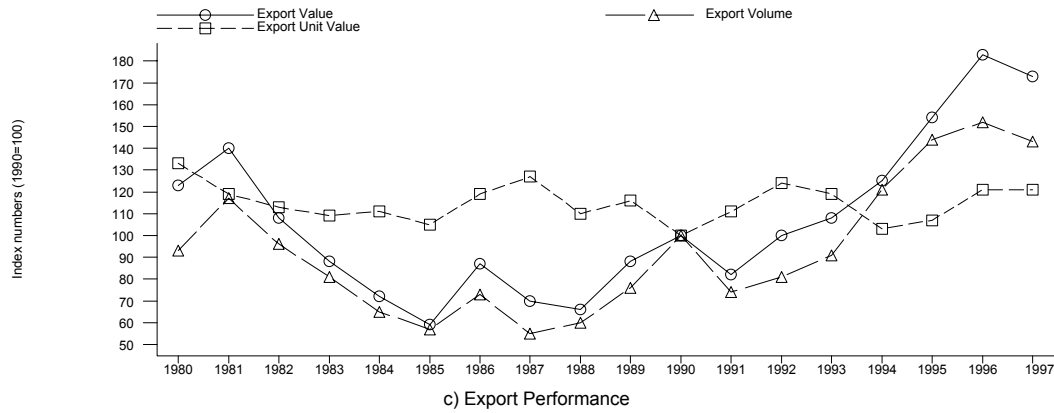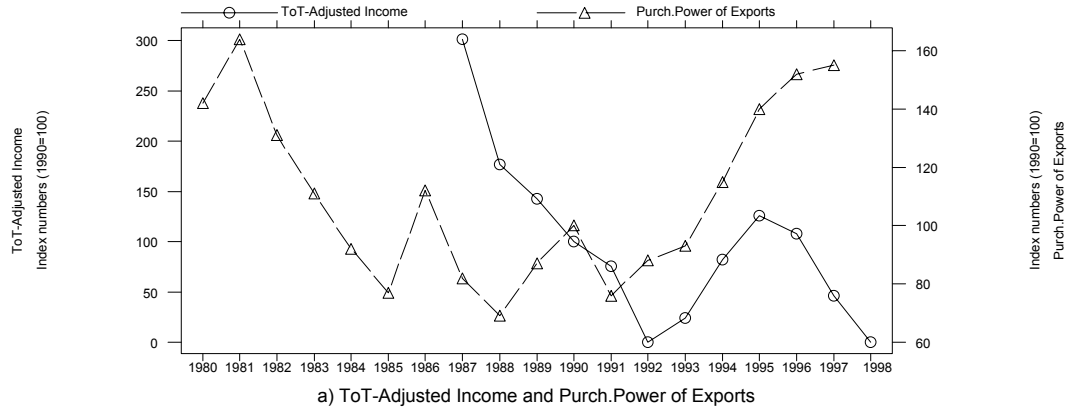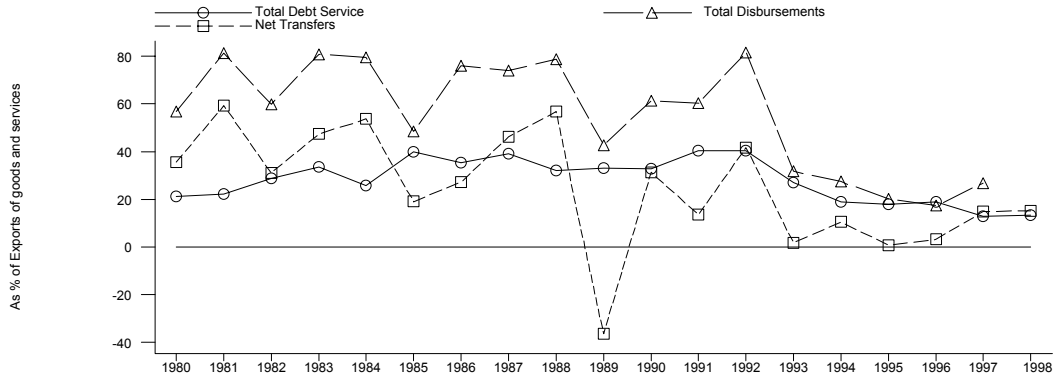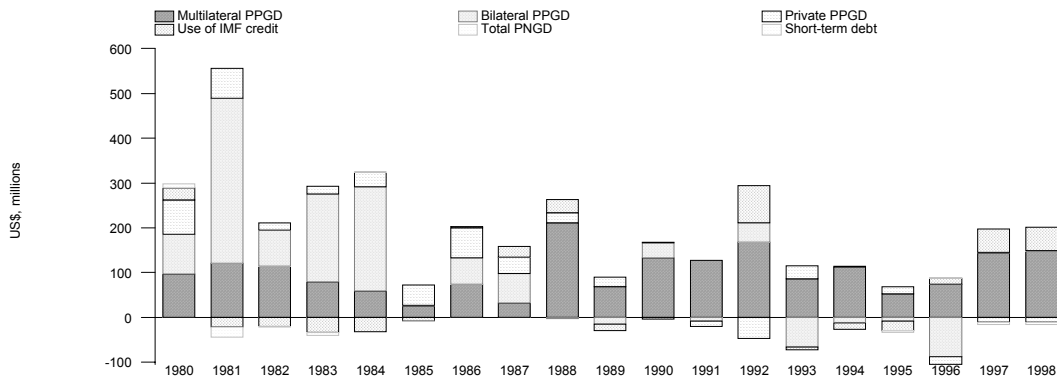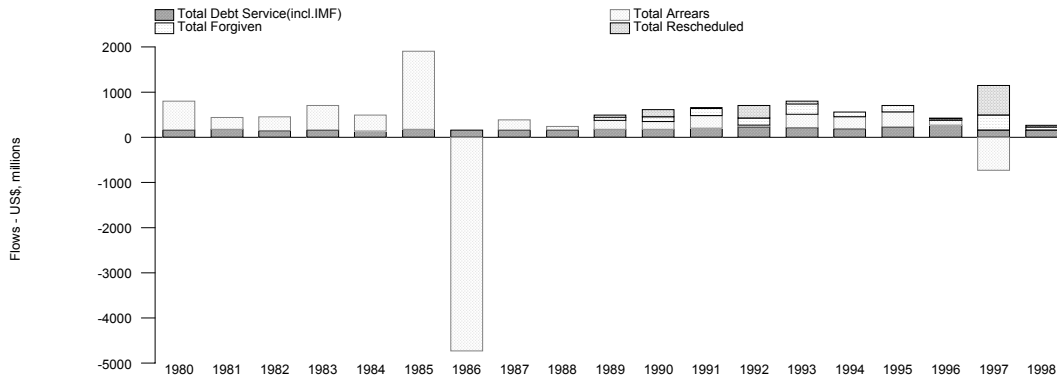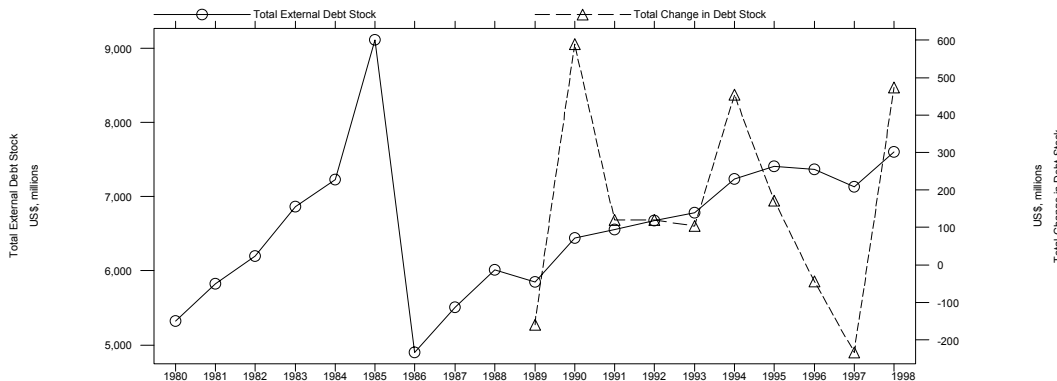
b) Composition of Net Transfers
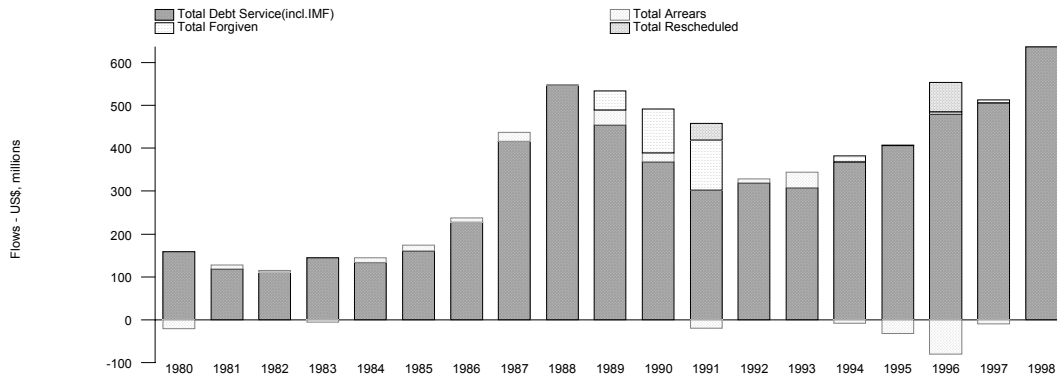
c) Actual Debt Service, Arrears, Forgiven, Rescheduled
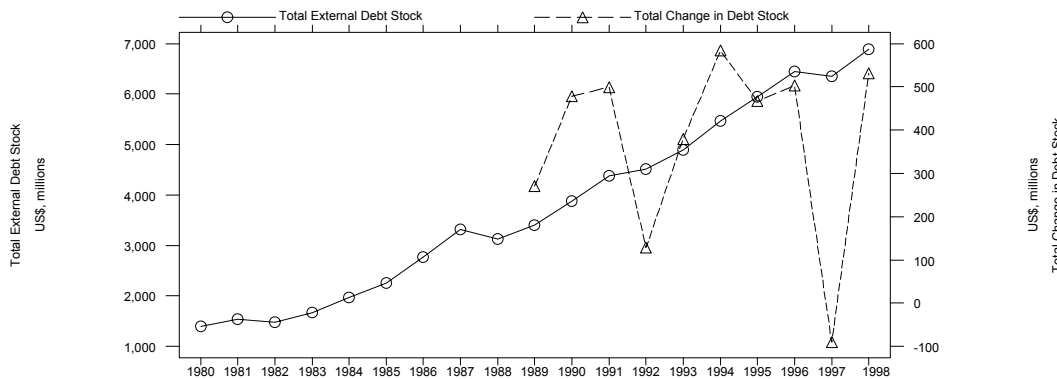
d) Total External Debt Stock

MOZAMBIQUE – Figure A.1
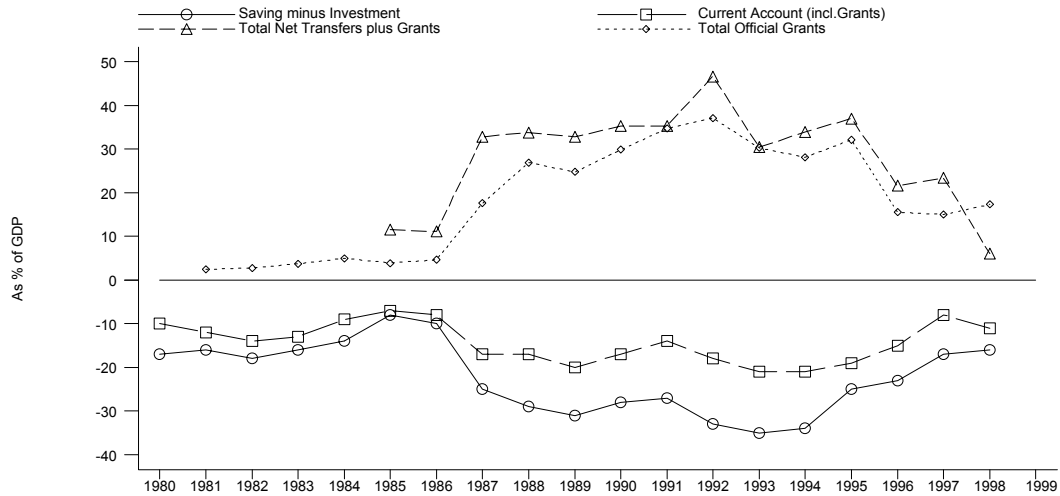
a) Saving-Investment Gap and Current Account Def. with External Flows
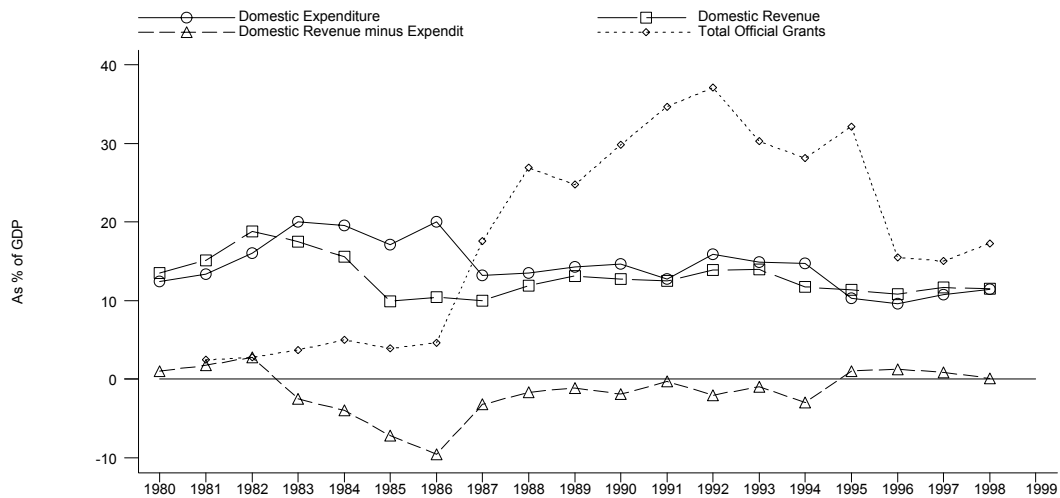
b) Fiscal Gap and Official Grants
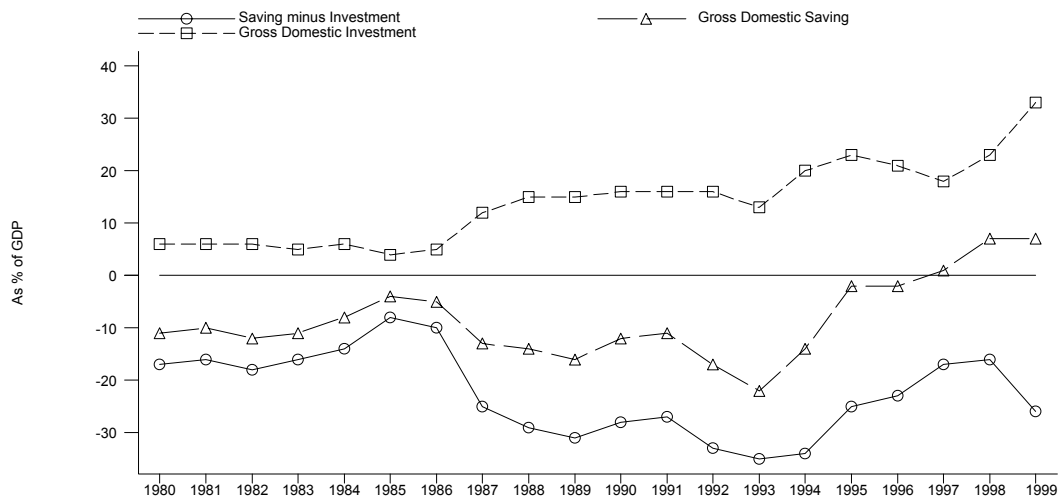
c) Gross Domestic Saving, Investment

MOZAMBIQUE – Figure A.2

a) ToT-Adjusted Income and Purch.Power of Exports

b) Terms of Trade

c) Export Performance

d) Import Values and Volumes
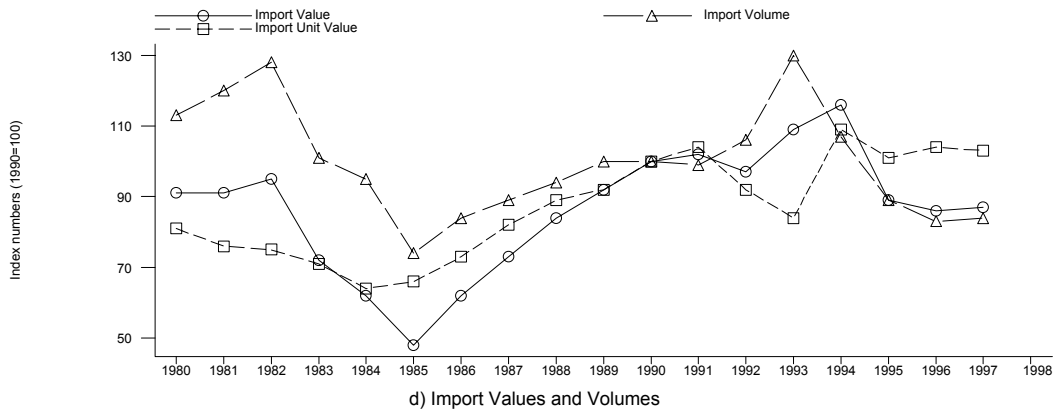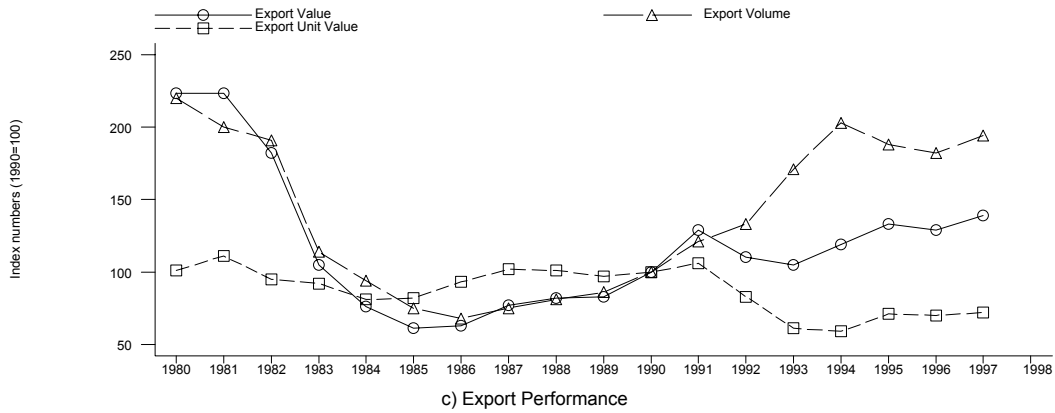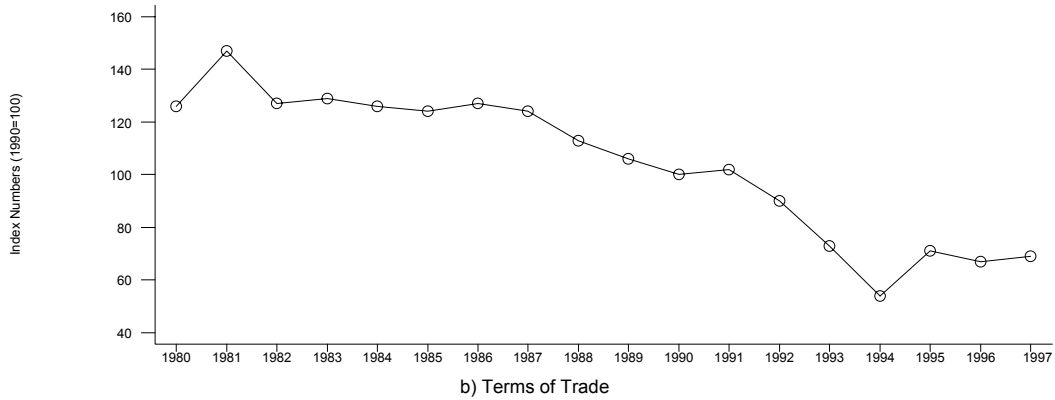
MOZAMBIQUE – Figure A.3

a) Total Debt Service, Disbursements, Net Transfers
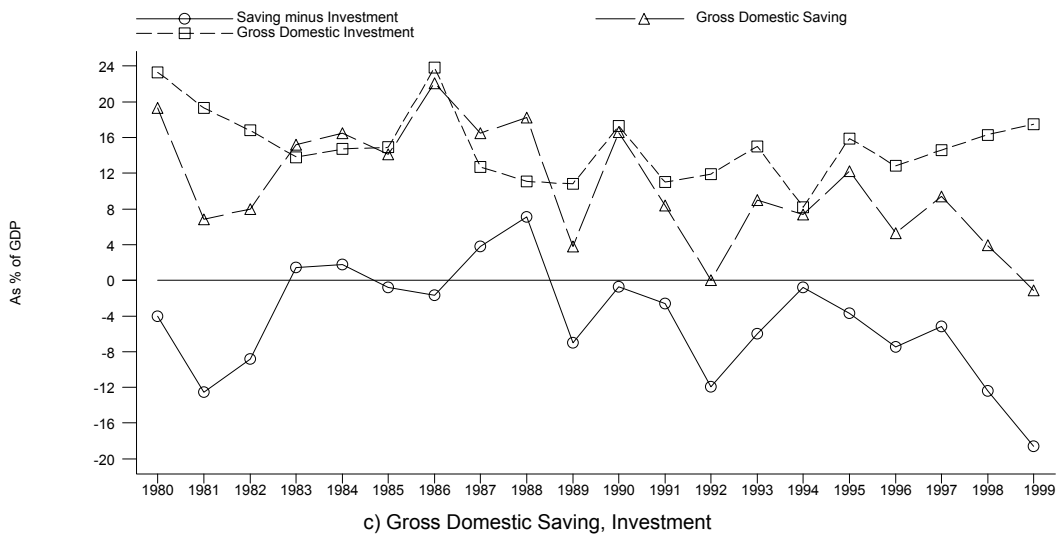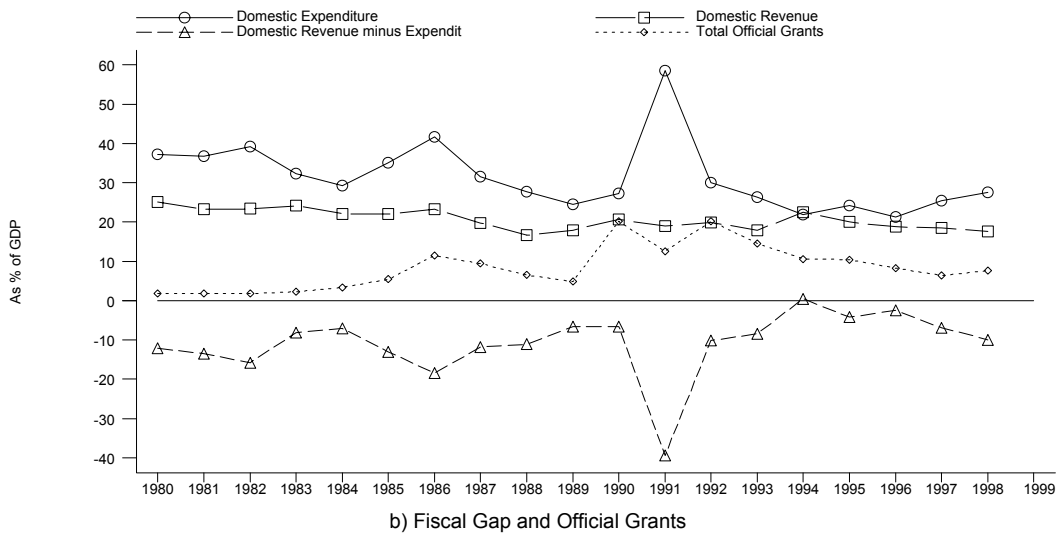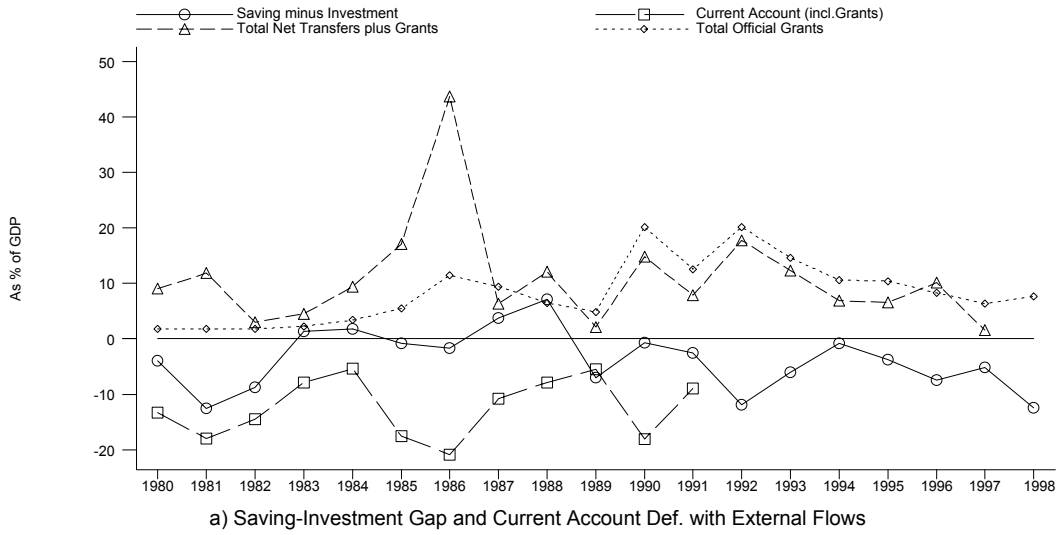

b) Composition of Net Transfers

c) Actual Debt Service, Arrears, Forgiven, Rescheduled
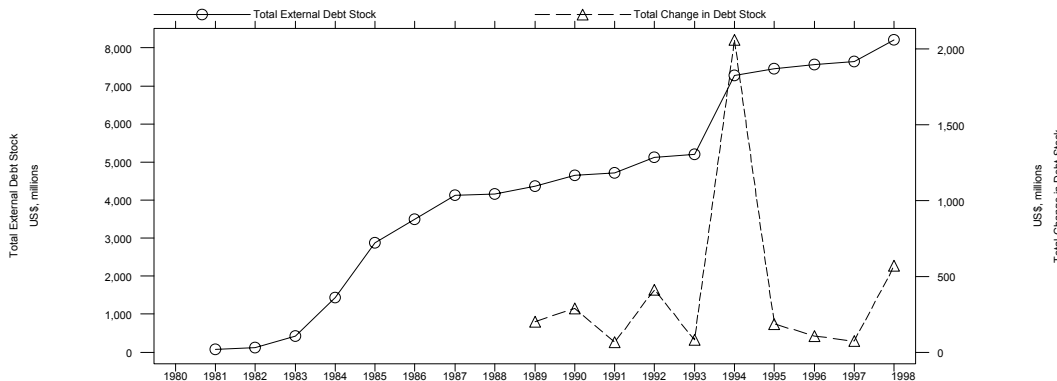
d) Total External Debt Stock

UGANDA – Figure A.1
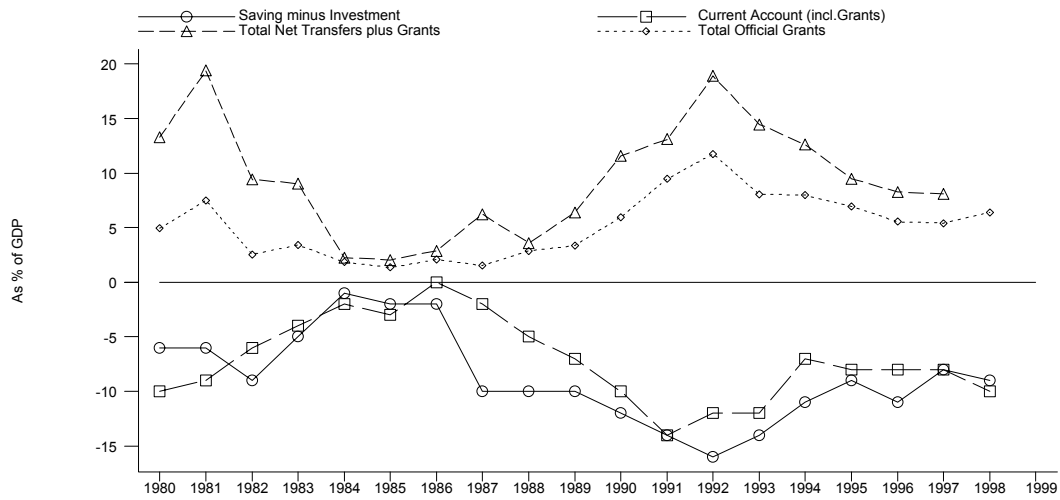
a) Saving-Investment Gap and Current Account Def. with External Flows

b) Fiscal Gap and Official Grants

c) Gross Domestic Saving, Investment

UGANDA – Figure A.2

a) ToT-Adjusted Income and Purch.Power of Exports

b) Terms of Trade

c) Export Performance

d) Import Values and Volumes

UGANDA – Figure A.3

a) Total Debt Service, Disbursements, Net Transfers

b) Composition of Net Transfers
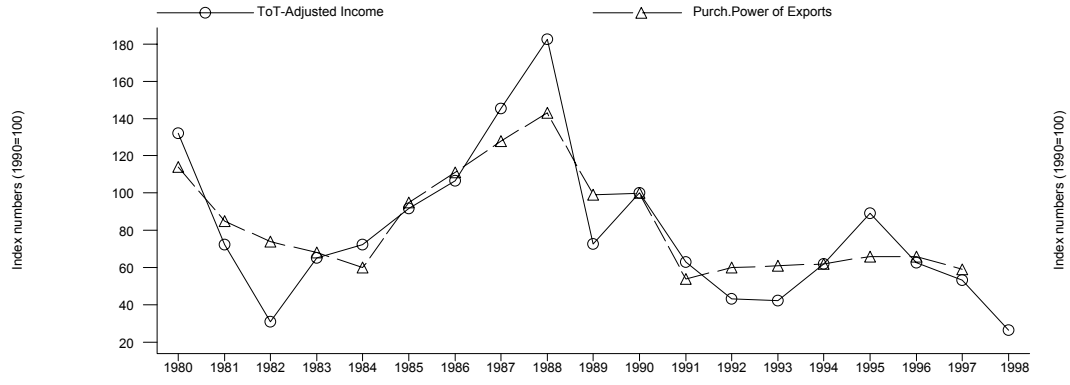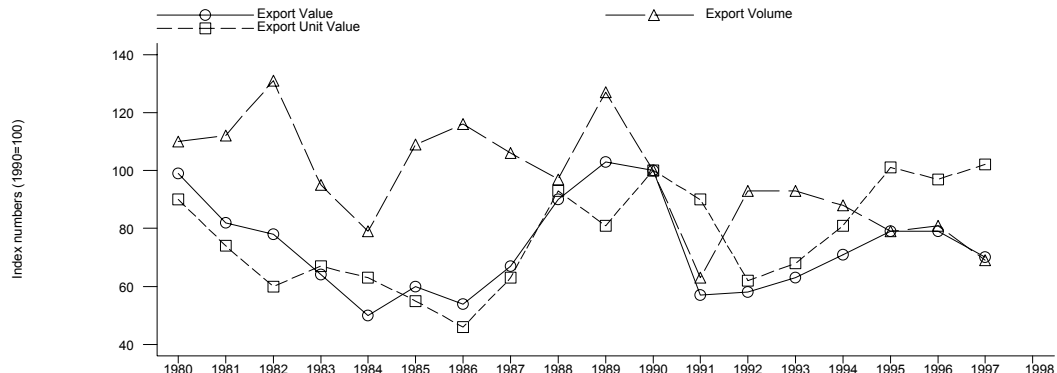

c) Actual Debt Service, Arrears, Forgiven, Rescheduled

d) Total External Debt Stock

TANZANIA – Figure A.1

a) Saving-Investment Gap and Current Account Def. with External Flows

b) Fiscal Gap and Official Grants

c) Gross Domestic Saving, Investment

TANZANIA – Figure A.2


a) ToT-Adjusted Income and Purch.Power of Exports

b) Terms of Trade

c) Export Performance

d) Import Values and Volumes

TANZANIA – Figure A.3

a) Total Debt Service, Disbursements, Net Transfers

b) Composition of Net Transfers

c) Actual Debt Service, Arrears, Forgiven, Rescheduled

d) Total External Debt Stock

ZAMBIA – Figure A.1

a) Saving-Investment Gap and Current Account Def. with External Flows

b) Fiscal Gap and Official Grants

c) Gross Domestic Saving, Investment

ZAMBIA – Figure A.2

a) ToT-Adjusted Income and Purch.Power of Exports

b) Terms of Trade

c) Export Performance
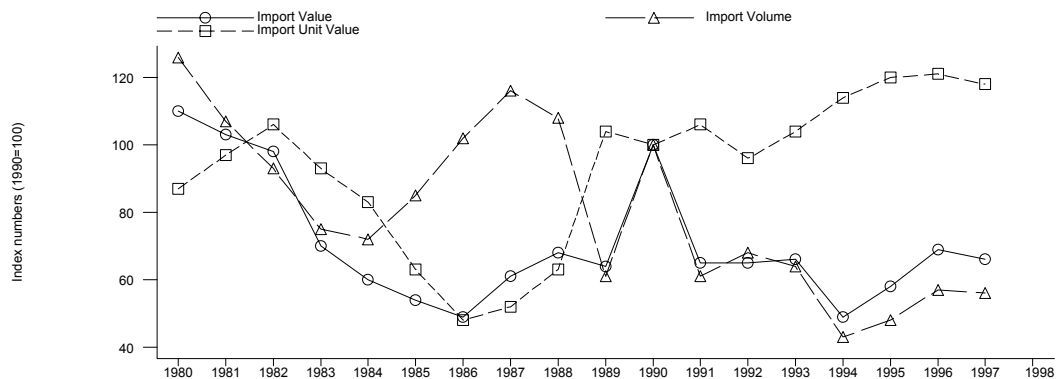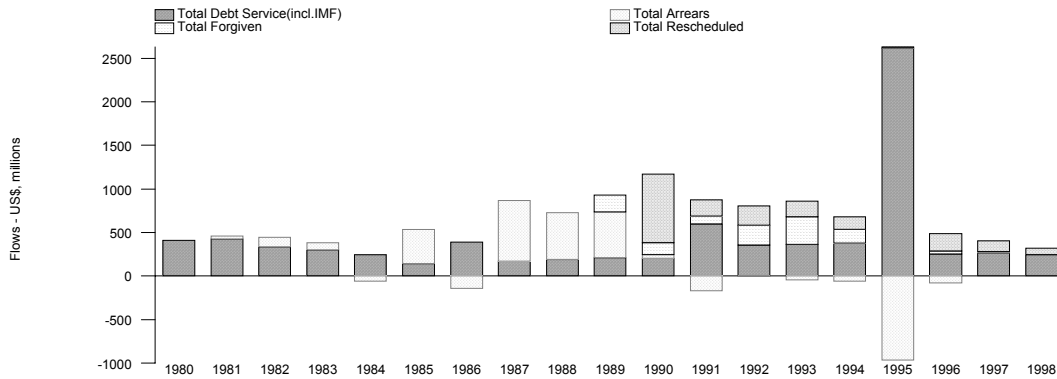

d) Import Values and Volumes
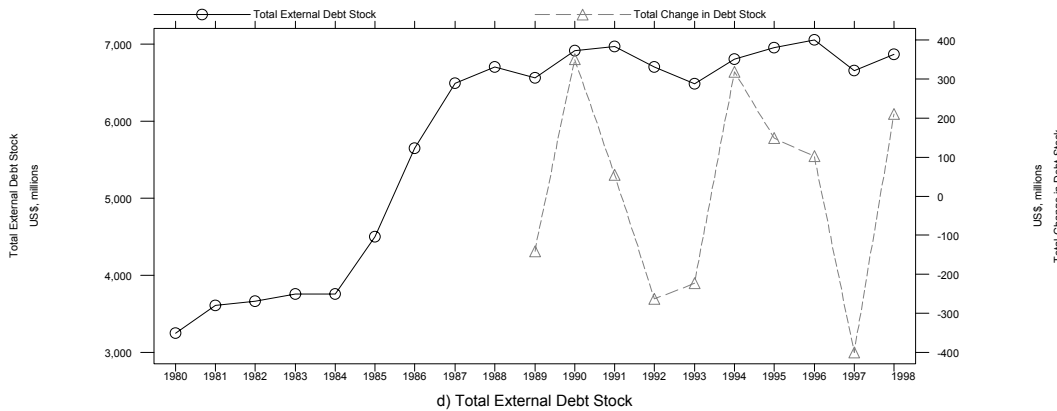
ZAMBIA – Figure A.3
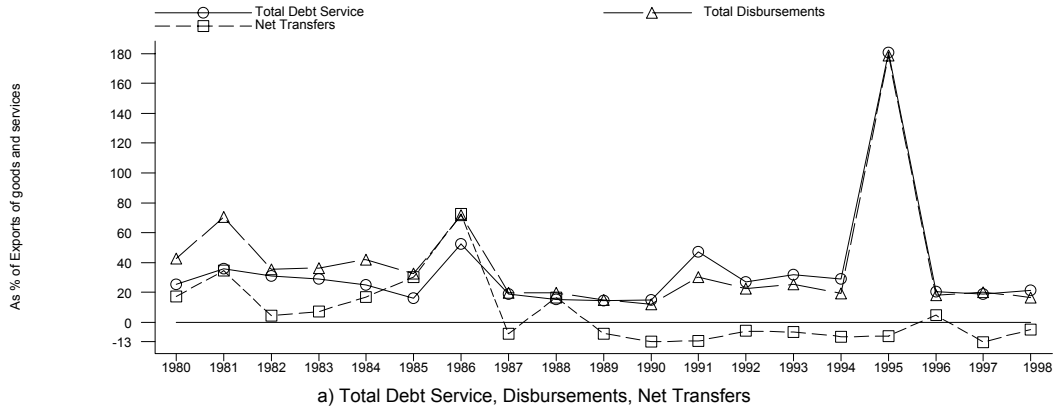
a) Total Debt Service, Disbursements, Net Transfers
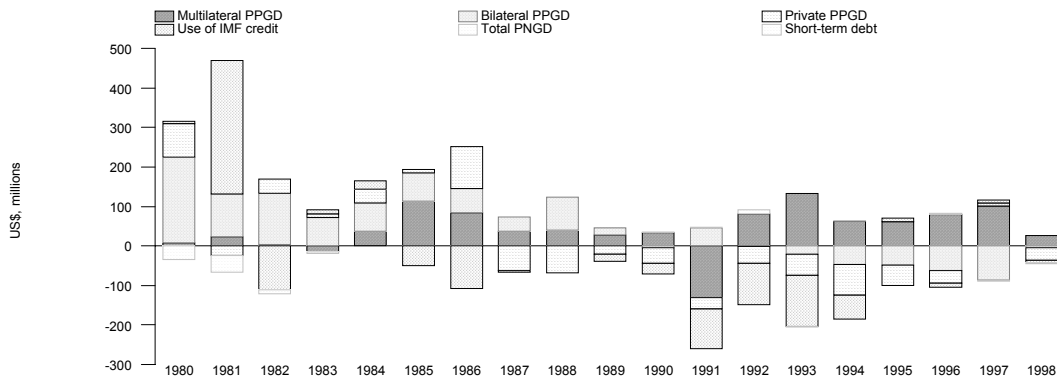
b) Composition of Net Transfers

c) Actual Debt Service, Arrears, Forgiven, Rescheduled

d) Total External Debt Stock

Figure A.4

a) Mali

b) Mozambique

c) Rwanda

d) Uganda

e) Tanzania

f) Zambia